



TENDER NO.: Tender no. PSER:PUR:PMX-350:044(ENQ:17:PP:0015:PUR:56) Date: 12/06/2017.

Bharat Heavy Electricals Limited

(A Govt. Of India Undertaking)

Power Sector, Eastern Region

BHEL BHAWAN, PLOT NO. DJ-9/1 , SECOTR II ,

SALT LAKE CITY , KOLKATA ,WEST BENGAL, INDIA

Phone : 033-23216130-31,033-23216130 FAX : 033-23211960

TENDER CHANGE NOTICE

Sub	TENDER CHANGE NOTICE (TCN-04 DTD. 18/07/2017)
Job	“PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.”
Ref	TENDER NO.: PSER:PUR:PMX-350:044(ENQ:17:PP:0015:PUR:56) Date: 12/06/2017. TCN-01 DTD. 17/06/2017, TCN-02 DTD. 23/06/2017,TCN-03 DTD:12/07/2017.

1) [With reference to above, following clarifications / changes, relevant to tender, may please be noted and complied with while submitting the offer.](#)

Sl. no.	Description/ Tender clause	Bidder's queries	BHEL's Clarification
1	NA	Since GST will be implemented in India from July 1st onwards, you are requested to clarify how BHEL will compensate the cost implication for the Aggregate, cement and other material on account of GST - Pls clarify.	Tender is for ready mix concrete for Bangladesh. Any Taxes for importing materials applicable in the source country shall be on bidder's account.
2	NA	The Successful bidder will carryout the Design mix after award of the contract, for tendering purpose you are requested to furnish the tentative design mix and cement contents for estimating our purpose.	No design mix available as on date. The design Mix to be carried out as per BS EN-206 and BS 8500 or equivalent international standard. List of approved labs shall be provided.

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Sl. no.	Description/ Tender clause	Bidder's queries	BHEL's Clarification
3	12 OF SCC	<p>About Release of Payment :</p> <p>Since, some of the material like aggregate will be supplied from India, we propose to receive the bill payment in Two currencies as per the % proposed below :</p> <p>i) Payment in Indian Rupees(INR) /USD : 60 %.(ii) Balance 40% of the Total Contract Price to be paid in BDT</p> <p>For the payment made in INR , BHEL can deduct IT @ 2%.</p>	<p>Payment shall be released from BHEL site office as per as per clause 12.12 of SCC.</p> <p>Since payment shall made in Bangladesh . Bangladesh Income Tax shall be deducted, if applicable. But no Indian Income Tax shall be deducted.</p>
4	NA	<p>Quality Requirements :</p> <p>If the Quality requirements of OP Cement / Sulfate resistant cement are not met for the cement available in Bangladesh , it is requested to confirm about any extra payment to be made for the cement imported from India.</p>	Type of cement to be used shall be as per BOQ
4a	Scc-3.2:Water(Page 5 of 31)	Clarify whether water source available at site is confirming to BSEN - 1008	Construction water of required quality is planned to be made available before start of work.
4b	NA	List of taxes that will be levied in Bangladesh.If levied whether they will be reimbursed.	The Bidder shall carry out their own tax diligence to get acquainted with the relevant rules and regulations of Bangladesh pertaining to the subject job. Except otherwise pointed out as exempted in Taxes & Duties clause , all other taxes and duties as applicable in source country and in Bangladesh is to Bidder's Account.

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4c	NA	If any export taxes are levied by Indian government ,please clarify whether they will be reimbursed.	Any Taxes for importing materials applicable in the source country shall be on bidder's account.
5	NA	There is no clause for mobilization advance in the Tender Documents. It is requested to incorporate the mobilization advance clause for 10 % of estimated contract value.	Interest bearing MA can be provided. Further details will be given in TCN - Mobilisation Clause added in SCC.
6	Clause No. 24.0 of Special Conditions of Contract PRICE VARIATION CLAUSE / ESCALATION Not Applicable for this Tender	There is no clause for price variation mentioned in the Tender Documents. Being an International Project and considering material import for long run, it is requested to incorporate the clause for price variation in the Tender.	PVC is not applicable for this contract. However, contract may be extended further by 6 months maximum. Further extension if any will be on mutually agreed time by bidder & BHEL.

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Sl. no.	Description/ Tender clause	Bidder's queries	BHEL's Clarification
7	<p>Clause No. 3.3.1 of Special Conditions of Contract PAGE 17 OF 96 OF NIT CONSTRUCTION POWER & GENERAL ILLUMINATION NETWORK:-Till such time the Construction Power is not ready, the Contractor has to make his own arrangement for the same as required to carry out the job under the scope of work within the quoted rate. On readiness of the Construction Power (expected tentatively within 6 months from start of work), BHEL Shall Provide Construction Power free of charge at 415V level at one point (within 500 M from his workplace / batching plant), bidder has to make his own distribution arrangement to draw electricity.</p>	<p>It stipulates that the construction power & power for general illumination work will be provided free of cost, but it may take 6 months from start of work. In such case we have to arrange the electricity at our own cost for 6 months. We interpret this as we should include the cost of DG running charges for 6 month in our offer price. Kindly confirm.</p>	<p>Yes. Also the following addition in clause 3.3.1 made if BHEL fails to provide power after 6 months from start of work, the contractor shall be continuing using of their DG. BHEL shall reimburse the actual cost of fuel consumed for running of the DG certified by BHEL Site Engineer. Procedure of keeping record for diesel consumption shall be decided at site. Once the Steady Construction Power is established, the re-imbusement of cost of fuel for DG shall be stopped. However, During Construction Power interruption, vendor has to keep their DG back-up to maintain steady production of Concrete till end of contract. SCC Clause No. 3.3.1 has been revised.</p>
8	<p>Clause No. 32.1.1 of Special Conditions of Contract Completion of Installation of 1st Batching Plant. (50 days from LOI). Completion of Installation of 2nd Batching Plant. (60 days from LOI)</p>	<p>It is not feasible to commission two Batching Plants within 60 days of LOI, as there will be lot of time required to get the import license and other formalities to transport the Batching Plant & its parts from India to Bangladesh. It is requested to reschedule the commissioning of Batching Plants, Considering the delays that may arise due to initial documentation and process for importing Machineries & Manpower to Bangladesh.</p>	<p>Vendor to comply SCC requirement.</p>

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9	<p>SCC-2.0 : SCOPE OF THE CONTRACT (Page 4 of 31) The scope of work includes the following:</p>	<p>We presume that transportation & Placing of concrete is excluded from the scope of the contractor under this package. Please confirm.</p>	<p>Generally Transportation is in the scope of respective vendors. However, in special cases, BHEL may ask the Bidder to transport upto pouring point. In case of transportation by bidder, the same shall be paid in respect item of BOQ.</p>
10	<p>SCC-3.2 : Water (Page 5 of 31) Till such time, Construction water facility is not ready, the contractor has to make his own arrangement for construction water. On readiness of the construction water system (expected tentatively within 3 months from start of the work), BHEL will provide construction water at one point within 500 m from work premises, free of cost to the contractor.</p>	<p>In case of delay in readiness of construction water, Contractor expects compensation in terms of time/money. Please clarify.</p>	<p>Same as 4a above</p>
11	<p>SCC-3.3 : Electricity (Page 6 of 31) Till such time the construction power is not ready, the Contractor has to make his own arrangement for the same as required to carry out the job under the scope of work within the quoted rate. On readiness of the Construction Power (Expected tentatively within 6 months from start of work), BHEL shall provide Construction Power free of charge</p>	<p>In case of delay in readiness of construction water, Contractor expects compensation in terms of time/money. Please clarify</p>	<p>Same as Sl. 7</p>

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Sl. no.	Description/ Tender clause	Bidder's queries	BHEL's Clarification
12	SCC-10.0 : Time Schedule/ Completion Period (Page 8 of 31) The entire work schedule under this scope of work shall be 24 months from date of intimation from BHEL	The work schedule/ completion of this work is purely dependent on the requirement from the BHEL/ Employer. Hence delay in the requirement will be resulting delay in completion period, which is not at all attributable to the contractor. Please clarify.	Same as Sl. 6 above
13	SCC-12.0 : Terms of Payment (Page 9 of 31) 12.12 Payment shall be made in USD as per order. However for reasons, solely at the discretion of BHEL, if USD amount is not possible to be paid then BDT equivalent of USD will be paid at Buying Exchange Rate of USD (of our banker) as on the date of payment.	We would request for minimum 70% of payment to be released in India as most of the materials will be sourced from India.	Same as Sl. 3 above
14	Mobilization Advance	We would request you to release atleast 10% as mobilization advance after submission of Security Deposit. Please confirm.	Same as Sl. 5 above
15	SCC-14.0 : Taxes, Duties etc. (Page 10 of 31)	Total Tax Incidence (TTI) for import comprises of	The Import for this project is free from Customs Duty, VAT and Supplementary Duty as per S.R.O-73 dtd. 19-03-1997. Also Regulatory Duty(RD), Advance Trade VAT(ATV) are exempted / not applicable. As per tender terms AIT is exempted too. However if any of the taxes as mentioned above are paid by the bidder as per the extant law in force in Bangladesh, the same shall be reimbursed at actuals subject to production of documentary evidence in support of such payment. However, the bidder shall obtain prior approval of BHEL before depositon of such taxes.
	For imports	<ol style="list-style-type: none"> 1. Customs Duty (CD) 2. Supplementary Duty (SD) 3. Regulatory Duty (RD) 4. AIT 5. VAT 6. Advanced Trading VAT (ATV). 	
	Bidder may please note that import for the project shall be in the name of our Employer/ Owner of the Plant/Project and such import other than office and Household equipment shall be exempted from payment of Customs Duty, VAT & AIT.	Please clarify whether Total Tax Incidence (TTI) is exempted or only Custom Duty, VAT and AIT is exempted?	

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15a	<p>For domestically sourced/ Execution BHEL will not deduct any VAT from Bidder's Gross Bill.....</p>	<p>Unless VAT is exempted to the Contractor by the Employer/Owner of the Plant/ Project from Concern Department of Govt. of Bangladesh, it shall be taken into account at the time of Contractor's Tax Assessment. A certificate of the exemption to the contractor may be issued in this regard Please clarify.</p>	<p>As per Section 6(4aa) of The Bangladesh Value Added Tax Act, 1991 , VAT shall not be collected by the bidder from BHEL as the Employeeer (i.e. Customer of BHEL) shall make deduction of VAT from BHEL's invoice and deposit the the same to the Government Treasury.Documentary evidence shall be provided to the bidder.</p>
15b	<p>For imports & domestically sourced/ execution Except otherwise mentioned, above, all taxes, Charges, Royalties, Cess and any state or central Levy and other taxes in or outside Bangladesh for material supplied for the work and for the execution of the contract shall be borne by the contractor.....</p>	<p>We understand that any exemption in duties & taxes for EXHAUSTIVE MATERIAL are applicable to the agency deployed by the Contractor. For example, if contractor deploys agency for importing aggregate in the name of Employer/ Owner of the plant/ Project, the agency will also get the exemption of Duties and Taxes. Please clarify.</p>	<p>Bidder to get acquainted themselves regarding sub-contracting of their scope of work. The Import for this project is free from Customs Duty, VAT and Supplementary Duty as per S.R.O-73 dtd. 19-03-1997. Also Regulatory Duty(RD), Advance Trade VAT(ATV) are exempted / not applicable. As per tender terms AIT is exempted too. However if any of the taxes as mentioned above are paid by the bidder as per the extant law in force in Bangladesh, the same shall be reimbursed at actuals subject to production of documentary evidence in support of such payment. However, the bidder shall obtain prior approval of BHEL before depositon of such taxes.</p>
16	<p>SCC-14.2: Taxes, Duties etc. (Page 10 of 31) New tax & duties, if imposed subsequent to latest due proposed to be introduced at a later date.</p>	<p>i) We request you to kindly reimburse the difference in case of any variation for all other taxes and duties if any, as applicable at actual on submission of documentary proof of payment. Please confirm. ii) The exemption certificate from Bangladesh Govt. for Custom Duty, AIT, VAT etc to be provided to us for more clarity in calculation of price.</p>	<p>Shall be as per tender terms.</p>

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17	<p>SCC-27.0: Extension of Time for Completion (Page 24 of 31)</p> <p>If the completion of work as detailed in the scope of work gets delayed beyond the contract / completion period due to reasons not attributable to contractor as this being FIRM price contract.</p>	<p>We request you to extend the TIME OF COMPLETION with financial benefit to the contractor. Please confirm.</p>	<p>Same as Sl. 12 above</p>
18	<p>PRICE VARIATION</p>	<p>We request you to incorporate PRICE VARIATION CLAUSE as the contract is centric on materials such as Cement, Sand, Stone Aggregate. HSD and the rates are highly fluctuating from the beginning of the contract. Please confirm.</p>	<p>No price variation is allowed in this Tender</p>
19	<p>GCC-Sl. No. 19: Arbitration Sole Arbitrator</p>	<p>i) The Arbitration and Conciliation Act, 1996, The Fifth, Sixth & Seventh Schedule has to be referred for the appointment of arbitrator. ii) The clarity on the arbitration is required as the contract calls for adhering the laws prevailing in Bangladesh also.</p>	<p>Arbitration shall be as per tender terms & in line with latest Govt. of India guideline and notification.</p>

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20	<p>GCC-SI. No. 25: Penalty clause Tender Change Notice (TCN-02 DTD. 23/06/2017) Non acceptance to LD/Penalty ... will be loaded Due date of submission of tender is scheduled on 12/07/2017</p>	<p>Please elaborate this clause, as it is not clear to us.</p> <p>We have already visited the project location on 21st & 22nd instant, but the investigation was not fruitful due to the long holiday due to Ramadan in Bangladesh. We have to visit once more time to the project location during next week to understand local market scenario. In view of the above, we request you to extend the date of submission for another 2 weeks, i.e., upto 26/07/2017.</p>	<p>Shall be as per tender terms.</p> <p>Bid submission date shall be extended up to 10 days after last TCN.</p>
21	<p>2.4 SCOPE OF THE CONTRACT under SCC The scope shall also include setting up & maintain a testing laboratory (one AC lab size 4.5 mtr. x 6 mtr. and 1 non AC lab 9mtr. x 4.5 mtr.) by the bidder at a suitable location near batching plant to carry out all relevant tests for 5 years from the date of start of operation. Detail of laboratory equipment as per Annexure-A& all relevant BS / BS EN / ASTM codes are to be arranged by the contractor within quoted rate. These equipment shall remain contractor's property and they will be allowed to take out the same after completion of contract period.</p>	<p>The project duration is 24 month as per time schedule as per clause 10.1 under SCC page no 8 of 31. But in this scope, it is mentioned that testing laboratory will be operated for 5 (five) years. Please clarify & confirm.</p>	<p>Main Package, i.e. Supply of RMC is for 24 months but the laboratory with manpower to be provided for 60 months. Clause 10.1 of SCC has been revised and shall be published with this TCN.</p>
22	<p>B9.4.6.2 Materials for concrete under TCC The specific gravity of the coarse aggregate shall be not less than 2.5 t/m³.</p>	<p>Please confirm the specific gravity of the coarse aggregate shall be not less than 2.5 t/m³.</p>	<p>Please confirm the specific gravity of the coarse aggregate shall be not less than 2.5.</p>
23	<p>3.1 OPEN SPACE FOR OFFICE & STORAGE Open spaces for material storage yard & construction of temporary site office may be allocated as made available by the customer / BHEL free of cost. Contractor has to make his own arrangements for labour colony including Electricity and water for the labour colony.</p>	<p>Please confirm if BHEL will provide space to set up batching plant at free of cost?</p>	<p>Yes. It will be provided.</p>

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Sl. no.	Description/ Tender clause	Bidder's queries	BHEL's Clarification
24	NIT, TCN-01 & TCN- 02 Ref Nos. of NIT, TCN-01 & TCN- 02 and reading of the NIT.	We understood from the respective ref nos. of NIT and its TCN-01 that it is a regular open tender; whereas TCN-02 ref no suggests that it is an E-Tender. Please clarify & confirm.	It is a regular open Tender.Mode of submission is clearly specified in the Tender Document.
25	Pre-Qualifying Criteria: General A Consortium / JV Bidding is not allowed.	Please clarify: A. If member companies from same group of companies working in different countries will be allowed to take part in the bidding jointly. B. A bidder can take part in the bidding in association with a Specialist Subcontractor and using credentials of the later.	A. Joint bidding not allowed. B. No.
26	TCN-02, Proforma of Bank Guarantee, Note 1 & 2 A. Validity B. Enforceable Town/City	A. Please confirm if validity will be counted from the date of issuance of guarantee. B. Please let us know name of the intended Town/City.	Period of Validity of EMD-BG= 6(Six) months from the date of issue of BG.
27	NIT: Annexure B Certificate by Chartered Accountant	We understand this is not required for the foreign bidders. Please confirm.	Not applicable for foreign bidders
28	NIT Price of Tender Document	A. We understand the Tender Document is free of cost. Please confirm.	Confirmed, no tender cost is envisaged in the tender.
29	NIT Bid Submission	Please confirm if local associate of the bidder can submit the bid on behalf of the Principal Bidder.	As per Tender(CI no. 2.0 of NIT)

Sl. no.	Description/ Tender clause	Bidder's queries	BHEL's Clarification
30	BOQ Various Issues	<p>A. Table 3, Concrete works, "transportation will be done by the user" means? Which transportation? Here user means the employer/construction contractor?</p> <p>B. Transportation from batching plant to concrete pouring location is covered by whom?</p> <p>C. If transportation of concrete is covered by bidder then who covers the cost of concrete pump?</p> <p>D. Table 6, item A.20b, if pump is required then cost of pump is to be covered in bidder's pricing?</p>	<p>A. Transportation of RMC from Batching Plant to pouring point by our other vendor for different construction works.</p> <p>B. As elaborated above.</p> <p>C. By by our other vendor for different construction works.</p> <p>D. proving concrete Pump is not in the scope of the bidder.</p>

- 2) Special conditions of contract (SCC) - Volume-IF(Rev-01) , superseding earlier SCC- Volume-IF(Rev-00)
- 3) Technical specification –Volume-II-TCC(Rev-01),superseding earlier TCC- Volume-II-TCC(Rev-00)
- 4) Revised Volume-III-(Rev-01)-(Priced-Price Schedule), superseding VOL-III - Priced-Price Schedule issued earlier along with NIT.
(Bidders are requested to submit their offer as per revised price Schedule (i.e. Priced PRICE SCHEDULE, REV-01) only. Offers from bidders in superseded Priced Price SCHEDULE shall not be considered.)
- 5) Revised Volume-III-(Rev-01)-(UnPriced-Price Schedule), superseding VOL-III - UnPriced-Price Schedule issued earlier along with NIT
(Bidders are requested to submit their offer as per revised Unpriced price Schedule (i.e. UnPriced PRICE SCHEDULE, REV-01) only. Offers from bidders in superseded UnPriced Price SCHEDULE shall not be considered.)
- 6) Due date of submission of offer against the subject tender is **extended from 19/07/2017 (15:00 hrs. IST) to 27/07/2017 (15:00 hrs. IST)**. **Techno-commercial bid shall be opened on 27/07/2017 (16:00 hrs. IST)**.
- 7) 'No deviation certificate' is attached. Bidder to submit their offer along with stamped & signed copy of this TCN & 'No deviation certificate' as per attached format only.
- 8) Bidder to submit their offer along with stamped & signed copy of this TCN as a token of acceptance.
- 9) All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD
DGM (Purchase)

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

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ANNEXURE - IV

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

To,
Bharat Heavy Electricals Limited,
POWER SECTOR – EASTERN REGION
2nd FLOOR, Block-DJ, Plot- 9/1, SECTOR
SALT LAKE CITY, KOLKATA – 700 091
FAX – 033-2321-1960

Sub: “PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.”

Tender No.: Tender no. **PSER:PUR:PMX-350:044(ENQ:17:PP:0015:PUR:56)** Date: 12/06/2017. TCN-01 DTD. 17/06/2017, TCN-02 DTD. 23/06/2017, TCN-03 DTD. 12/07/2017 & TCN-04 DTD.18/07/2017

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/newspapers and in case of 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 *and confirm our acceptance to **reverse auctioning process*** and we hereby convey our unqualified acceptance to all terms and conditions as stipulated in the tender and NIT.

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 strictly in accordance with tender instructions Thanking you,

Yours faithfully,

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

TECHNICAL SPECIFICATION OF CONCRETE

for

Providing Ready Mix Concrete

for 2x660 MW

Maitree Super Thermal Power Project

at

Moidara Village, Rampal Upazila,

Bagerhat District, Bangladesh



Bharat Heavy Electricals Limited
(A Govt. of India Undertaking)
Power Sector – Eastern Region
Plot – DJ 9/1, Sector II, Salt Lake
Kolkata-700091

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B9.4.6 Concrete works

B9.4.6.1 General

The concrete works shall be based on applicable approved codes and standards.

In general, the concrete for foundations shall be Grade 30. The type of cement to be used shall satisfy the requirements of the relevant international and local Standards or equivalent. All materials used for concrete and reinforced concrete structures shall be of the best quality and free of defects likely to undermine the strength and shorten the service life of the works. The materials furnished shall comply with the agreed standards with the requirements of the soil investigation report regarding the aggressiveness of soil and water and with all requirements set out in these Specifications. The high sulphate content according water analysis shall be considered for concrete in contact with sea water.

All materials shall be stored and handled in a manner that will prevent contamination and/or deterioration. Deteriorated and/or contaminated material shall not be used for the concrete and shall be removed from the site at the expense of the Contractor.

All aggregate and sand used in the production of concrete shall be thoroughly tested for silica alkaline reaction, flakiness, aggregate crushing value etc.

The design and execution of the works shall consider a minimum development, the corrosion risks and the durability of the concrete and be based on the latest applicable approved codes and standards as listed in Section B0.

B9.4.6.2 Materials for concrete

Cement

The cement used for concrete, reinforced concrete, mortar, grout and plaster (acid or sea water resistant) works shall be Ordinary Portland Cement either sulphate resisting type (cement type V) as per ASTM C150 or conforming to ASTM C150-16 with C3A content limited to $\leq 5\%$ as specified in type- V or Type –I cement as per ASTM C150-16 with C3A content limited to 5 to 8 % or shall comply with as per BS EN 197-1 etc. required as per BOQ Items. The manufacturer's test certificate will normally be accepted as proof of compliance with Specifications but the Employer may order further tests as specified in the relevant standards. The Contractor shall bear all expenses required for the preparation, dispatch, and tests of the samples. **The cement content in the mix shall be design as "Minimum requirement as per respective code plus 50 kg. (e.g. if minimum cement requirement for any job is 400 kg based on severe exposure then the design mix cement shall be $400+50= 450$ kg/cum) "However final cement content in the mix will be approved by BHEL/BIFCL.**

All accepted cement shall be delivered to the site in strong, sealed, waterproof containers unless written approval to the contrary is given. All cement delivered shall be marked in accordance with standards, stating the following particulars: type of cement, strength category, manufacturer, weight, quality control marking, date and transport data.

The cement shall be protected against all impurities and dampness during transportation and storage on the site. Sufficient cement shall be stored on site to ensure continuity of the

works and to allow testing of any consignment before it is required for use. All cement shall be fresh when delivered. Cements of different types shall not be mixed one with another. Consignments shall be used in order of delivery.

Cement shall be stored in bags or in unopened containers on a dry, raised platform in a well-ventilated but watertight building.

Cement shall be kept in the store until actually required for use on the works and any cement temporarily placed near the mixer shall be adequately protected. Cement stored on site for a period longer than two months shall be laboratory tested before use.

Water

The water shall be clean and free of salt, oil or acid, organic material or other matter harmful to the finished product and shall be from a source approved by the Employer. The Contractor shall undertake tests to determine the sulfate content and acidity of the water and make adequate arrangements to deliver and store sufficient water at the work site for use in mixing and curing the concrete. Water shall comply with the requirements of BS EN 1008 or equivalent.

Aggregates

Materials used as aggregate shall be obtained from a source known to produce aggregate satisfactory for concrete and shall be chemically inert, strong, hard, durable, of limited porosity and free from adhering coats, clay lumps or organic impurities that may impair the strength or durability of the concrete. Aggregate shall comply with and be tested in accordance with the requirements of **ASTM C-33** , BS 812, BS 882, BS 1199 and BS 1200 or equivalent.

Each size of aggregate shall be separately stored in a manner that will prevent contamination, intermixing and/or segregation. The equipment and methods of handling aggregates shall be such as to prevent deterioration and contamination of the stockpiles.

Frequency of testing the aggregates shall be at least as follows:

Frequency of testing

Sl. No.	Test Type	Coarse Aggregate	Fine Aggregate
1	Grading of each aggregates	Daily	Daily
2	Grading of combined aggregates	Daily	Daily
3	Specific gravity	7 days	7 days
4	Magnesium sulphate soundness	30 days	-
5	Clay silt and dust content	Daily	Daily
6	Shape (elongation and flakiness)	Twice a week	-
7	Los Angeles abrasion	Initially only	Initially only
8	Moisture content	2 days	Daily
9	Drying shrinkage	Initially only	Initially only
10	Organic impurities	30 days	30 days

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Fine aggregate shall be clean natural sand or sand derived by crushing stone and shall consist of hard, dense, durable uncoated particles. Sand derived from stone unsuitable for coarse aggregate shall not be used as fine aggregate.

The grading of the aggregates shall be such as to produce a concrete of the specified proportions, which will work readily into position without segregation and without the use of excessive water content. Grading shall be controlled throughout the work so that it conforms closely to that used for the preliminary tests.

Washing, screening, classifying and other operations on the fine aggregate required to meet this specification shall be done by the Contractor. Washing is required if the content of salt and other impurities adhering to the aggregates exceed the level given in the standards.

Coarse aggregate shall be crushed or uncrushed gravel or crushed stone and shall be free of decomposed stone, clay, earth or other deleterious substances. The specific gravity of the coarse aggregate shall be not less than 2.5 t/m³. Aggregate of crushed natural stone is deemed adequate if the stone reveals a crushing strength of 1000 kg/cm² when tested. Friable, flaky and laminated pieces, mica and shale shall only be present in such quantities as not to affect the strength and durability of the concrete.

The grading of coarse aggregate for concrete shall comply with the requirements of BS 882 or equivalent. Samples of aggregates shall be submitted to the Employer, together with a sieve analysis showing the proportion by weight passing sieves. Should it become necessary to change the source or characteristics of the material supplied, this shall only be done after additional tests.

Concrete additives

If necessary, concrete additives of HRWRA (PCE-based Super plasticiser), and Corrosion Inhibitors (Inorganic or Organic formulation), Anti washout Admixture (Acrylic based) approved by the Employer could be used to improve consistency, workability quality and strength of the concrete.

Waterproof concrete and mortar shall be used where necessary. Waterproofing shall be achieved by an approved brand of additive, which shall be used in accordance with the manufacturer's instructions.

Accelerating and retarding additives shall only be used in case of necessity and after obtaining the written approval of the Employer.

Super plasticizers and air entraining additives

Super plasticizers (PCE-based) and air entrainers are intended to reduce bleeding of free water at the surface. It shall only be used after the written approval of the Employer and in accordance with the manufacturer's instructions.

B9.4.6.3 Concrete mixes

The mix proportions shall be determined by proper mix design based on the requirements for strength, workability and the particular site in which the concrete shall be placed. The design of mixes shall be based on the principles of BS 5328 or equivalent (e.g. DIN 1045) and the British Building Research Station Publication "Design of normal Concrete Mixes".

Before concreting commences, the Contractor shall make trial mixes to determine the mix proportions required to produce the strengths specified for each class of concrete and for each degree of workability required to allow placing transporting and compacting of the concrete. Only materials which the Contractor intends to use for concreting shall be used in the trial mixes.

Test cubes from trial mixes shall be made and tested in accordance with BS1881 or equivalent (e.g. DIN 1048 Part 2).

The amount of water used in the concrete shall be adjusted as required to ensure such a consistency that it can be readily transported, placed and compacted without segregation of the materials or bleeding of free water at the surface. Addition of water to compensate for stiffening of the concrete before placing shall not be permitted. Consistency of the concrete shall be checked by slump tests and shall not exceed the values given by BS-5328 and BS 1881 or equivalent.

The cement and aggregate shall be thoroughly mixed in a batch-type pug mill mixer. The capacity of the mixer shall not be less than 1 (one) cubic meter. Partly set or excessively wet concrete shall not be used. No concrete shall be mixed by hand except some small quantities approved by the Employer, the proportion of cement in this case being increased by 10%.

The Contractor shall establish and maintain a field laboratory on the site and this laboratory shall be available at all times to the Employer. The laboratory shall be adequately equipped to ensure that all necessary testing work can be carried out in compliance with the standards.

B9.4.6.4 Strength of concrete

All test cubes shall be made and tested for compressive strength in accordance with BS 1881 or equivalent.

The minimum required strength for different classes of concrete is as follows:

Sl. No.	Grade	Characteristic strength N/mm ²	Lowest grade for compliance with appropriate use
1	7	7.0	lean concrete
2	10	10.0	plain mass concrete
3	15	15.0	reinforced concrete with lightweight aggregate
4	25	25.0	reinforced concrete with dense aggregate
5	30	30.0	reinforced concrete with dense aggregate (in contact with seawater, waste water and below ground level)
6	35	35.0	reinforced concrete with dense aggregate (Turbine Foundation, Boiler feed Pump Foundation)
7	30	30.0	pre-stressed concrete with post-tensioned tendons
8	40	40.0	pre-stressed concrete with pre-tensioned tendons

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9	50	50.0	precast concrete members
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The characteristic strength shall be determined from test cubes of 150 mm nominal size at an age of 28 days.

Providing Ready Mix Concrete
for 2x660 MW
Maitree Super Thermal Power Project
at
Moidara Village, Rampal Upazila,
Bagerhat District, Bangladesh

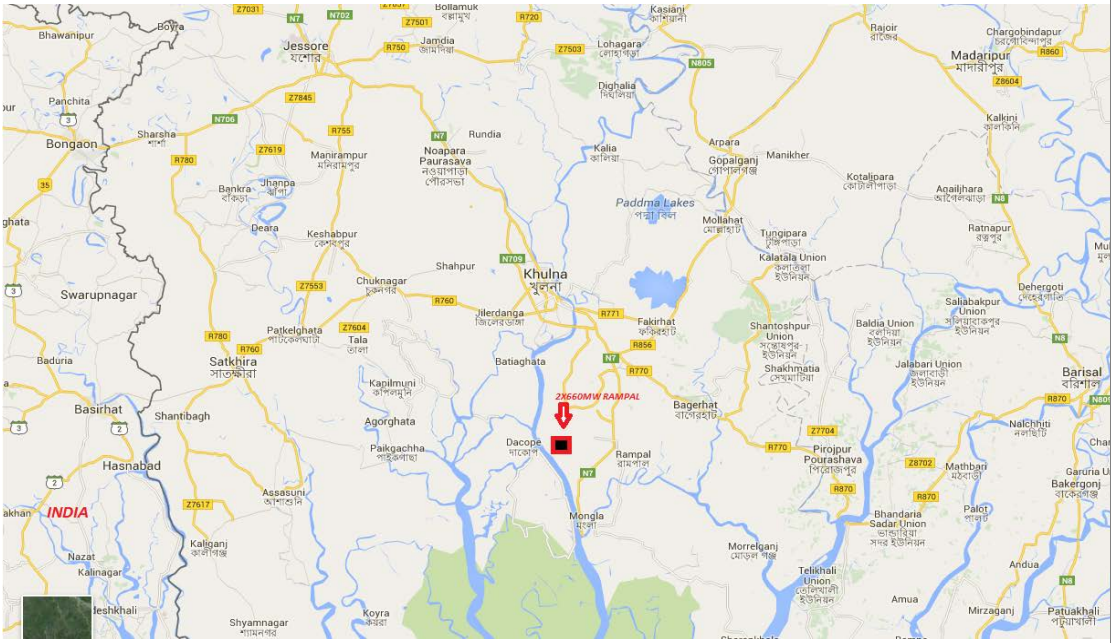


Bharat Heavy Electricals Limited
(A Govt. of India Undertaking)
Power Sector– Eastern Region
Plot–DJ9/1, Sector-II, Salt Lake
Kolkata-700091

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The Special Conditions of Contract (SCC) inscribed hereunder shall be read and construed along with General Conditions of Contract (GCC, Volume-IA) and in case of any conflict or inconsistency, the provision of the Special Conditions of Contract, Volume-IC shall prevail.

1.0	PROJECT SYNOPSIS AND GENERAL INFORMATION
1.1	<p>The 2 x 660 MW MAITREE SUPER THERMAL POWER PROJECT is located in Moithara Village, RampalUpazila, Bagerhat District, Bangladesh.</p> <p>The Bidder shall acquaint himself by a visit to the site, with the conditions prevailing at site before submission of the bid. The information given here in under is for general guidance and shall not be contractually binding on the Owner. All relevant site data/information as may be necessary shall have to be obtained / collected by the Bidder.</p>  <p style="text-align: center;">LOCATION MAP:2X660MW MAITREE RAMPAL PROJECT</p>



LOCATION MAP:2X660MW MAITREE RAMPAL PROJECT

1.2	<p>APPROACH TO SITE</p> <p>The nearest town Khulna is at a distance of 23 km from project site. The site is Connected by road from Mangla- Khulna Highway.</p> <p>Nearest Domestic airport is Jessor, Bangladesh at a distance of about 93 KM and international airport is Dhaka at a distance of 263 KM, Bangladesh</p>
1.3	Owner: BIFPCL (BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (PVT.) LIMITED)
2.0	SCOPE OF THE CONTRACT
2.1	<p>The scope of work includes the followings:</p> <ol style="list-style-type: none"> 1. Procurement, Supply, storing, of approved quality aggregates, Cement, admixtures etc. for concrete of various grades as per details given in BOQ or elsewhere in the contract document. 2. Establishment of Design mix of various grades as per BS EN-206 and BS 8500or equivalent International Standard. 3. Production of concrete in computerised automatic batching plant of required capacity as per quality norms and as per Field Quality Plan (FQP) approved by Customer. 4. Conducting various tests by establishing concrete testing Laboratory at site as per FQP including construction of laboratory building, erection of approved and calibrated instruments required for testing. 5. Generally, supply of concrete shall be done at batching plant to the transit mixers placed by respective vendors of BHEL. However, on special case, transportation of concrete shall be done to various location of the project as per priority decided by BHEL.
2.2	Mix design (C 8/10, C 12/15, C 16/20, C 20/25, C 25/30, C 30/37, C 354/45, C 40/50 or as required grade) for all concreting shall be carried out either at site or from a reputed institute, contractor has to ensure adding of admixture and minimizing of cement content in line with relevant BS code as

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	advised by BHEL time to time without any additional cost.	
2.3	The work to be performed under this specification consists of providing all labour, materials, consumables, equipment, temporary works, temporary storage sheds for contractors own use, temporary colony for labour and staff, temporary site offices, constructional plant's transportation/handling and all incidental items not shown or specified but reasonably implied or necessary for the completion of subject scope, all in strict accordance with the specifications including revisions and amendments thereto as may be required during the execution of work.	
	SANITARY The Contractor shall furnish and maintain sanitary facilities for the use of all personnel engaged in the Work under this Contract. These facilities shall be subject to the approval by the Employer.	
2.4	The scope shall also include setting up & maintain a testing laboratory (one AC lab size 4.5 mtr. x 6 mtr. and 1 non AC lab 9mtr. x 4.5 mtr.) by the bidder at a suitable location near batching plant to carry out all relevant tests for 5 years from the date of start of operation. Detail of laboratory equipments as per Annexure-A& all relevant BS / BS EN / ASTM codes are to be arranged by the contractor within quoted rate. These equipments shall remain contractor's property and they will be allowed to take out the same after completion of contract period. For conducting day to day test Two Chemist/Qualified quality engineer along with sufficient number of laboratory assistant to be deployed for round the clock operation. Operation of Laboratory is vendor's responsibility. Payment for operation of laboratory, manpower shall be paid as per Schedule -3 of Price Schedule.	
2.5	All quality standards& other technical requirements shall be strictly adhered to. The Bidder shall fully apprise himself regarding prevailing conditions at the site, climatic conditions including monsoon pattern, soil conditions, local conditions and site specific parameters and shall include for all such conditions and contingent measures in the bid, including those which may not have been specifically mentioned in the specifications.	
2.6	All works under this specification, unless specified otherwise, shall conform to the latest revision and/or replacement of the following or any other British Standard Specifications and Codes of Practice. In case any particular aspect of work is not covered specifically by customer Specification, any other international standard practice as may be specified by the Engineer shall be followed.	
3.0	SITE VISIT	
3.1	Contractor should visit site and acquire full knowledge & information about site conditions prevailing at site and in and around the plant premises together with all the statutory, obligatory, mandatory requirements of various authorities before submission of the bid in line with the above, site visit confirmation will be required to be submitted by the bidder with the technical bid.	
3.1	OPEN SPACE FOR OFFICE &STORAGE	
3.1.1	Open spaces for material storage yard & construction of temporary site office may be allocated as made available by the customer / BHEL free of cost. Contractor has to make his own arrangements for labour colony including Electricity and water for the labour colony.	
3.1.2	Construction of necessary stores and storage of materials shall be in contractor's scope. BHEL shall provide available space as received from customer on mutually agreed basis. Security of stores & work place shall be in Contractor's scope.	
3.1.3	REMOVAL OF TEMPORARY FACILITIES When the Work is completed all such temporary structures and facilities shall be removed from the Site and the area shall be restored to its original condition	
3.2	WATER	
3.2.1	Construction water of required quality is planned to be made available before start of work at one point within 500 m from work premises, free of cost to the contractor. Bidder to note that no ground water is allowed for construction purpose by the project authority.	

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3.2.2	Further necessary network for construction & drinking water system shall be done by the bidder at his own cost.
3.2.3	Contractor should arrange on their own, drinking water in their labour colony.
3.2.4	BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of water supply and the contractor shall claim no compensation for delay in work for such interruption. Contractor may make standby arrangement for water for which no separate payment shall be made by BHEL.
3.2.5	Contractor will have to arrange for storage of water to meet the day-to-day requirement. Bidder will ensure adequate supply of construction water to meet the requirement of water during major concreting.
3.2.6	The availability of water (construction as well as drinking) in Maitree project may be limited. Contractor shall ensure that no water is wasted. In this regard the contractor shall take all necessary measure towards preservation of water.
3.3	ELECTRICITY
3.3.1	<p>Till such time the Construction Power is not ready, the Contractor has to make his own arrangement for the same as required to carry out the job under the scope of work within the quoted rate. On readiness of the Construction Power (expected tentatively within 6 months from start of work), BHEL Shall Provide Construction Power free of charge at 415V level at one point (within 500 M from his workplace / batching plant), bidder has to make his own distribution arrangement to draw electricity.</p> <p>If BHEL fails to provide power after 6 months from start of work, the contractor shall be continuing using of their DG. BHEL shall reimburse the actual cost of fuel consumed for running of the DG certified by BHEL Site Engineer. Procedure of keeping record for diesel consumption shall be decided at site.</p> <p>Once the Steady Construction Power is established, the re-imbusement of cost of fuel for DG shall be stopped.</p> <p>However, During Construction Power interruption, vendor has to keep their DG back-up to maintain steady production of Concrete till end of contract.</p> <p>The bidder will have to procure & install adequate area illumination system during construction right from start of his work. This system will include temporary pole lighting, portable lighting towers with sufficient DG back-up for area lighting at different working areas for execution of the work & safety of workmen within the quoted rate.</p> <p>The illumination should be such that minimum illumination requirement as specified in specification or any-where for general illumination is maintained.</p> <p>GENERAL:-</p> <p>If any other voltage level (other than normally available) is required, the same shall be arranged by the contractor from power supply as above. Contractor will have to provide at his own cost necessary calibrated energy meters (tamper proof, suitably housed in a weather proof box with lock & key arrangement) at point of power supply along with calibration certificate from authorized / accredited agency for working out the power consumption. In case of recalibration required for any reason the necessary charges including replacement by calibrated meters is to be borne by the contractor.</p> <p>Supply of electricity shall be governed by Electricity Act and Installation Rules and other Rules and Regulation as applicable. The contractor shall ensure usage of electricity in an efficient manner and the same may be audited by BHEL time to time. In case of any major deviation from normally accepted norms is observed, BHEL will reserve the right to impose penalty as deemed fit for such cases.</p>
3.3.2	The bidder shall have to provide earth leakage circuit breaker at each point wherever human operated electrical drives / T&Ps are deployed.
3.3.3	The power supply will be from the available source of customer. BHEL shall not be responsible for any inconvenience or delay caused due to any interruption of power supply / variation in voltage

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	level and no compensation for delay in work can be claimed by the contractor due to such non-supply on the grounds of idle labour, machinery or any other grounds.
3.3.4	Bidder will have to arrange sufficient illumination at their own work areas.
3.3.5	The contractor should ensure that the work in critical areas is not held up in the event of power breakdown. In the event of breakdown in the electric supply, if the progress of work is hampered, it will be the responsibility of the contractor to step up the progress of work after restoration of electric supply so that overall progress of work is not affected.
3.3.6	The contractor shall have to make arrangement at their own cost for illumination that will be required in the working area for execution of the work & safety of workmen.
3.3.7	The contractor shall have to make arrangement at their own cost for illumination etc in labor colony. However there may be provision of Chargeable Power for labor colony for which contractor has to install meters and necessary accessories
4.0	TOOLS & PLANTS
4.1	All the tools and plants required for execution of the above work are in contractor's scope.
5.0	MATERIAL SUPPLY
5.1	SUPPLY OF MATERIALS – All requisite approved brand / quality materials viz. cement, aggregates, sand, admixtures and consumables(like gas, electrodes etc and other materials required for the work)shall be supplied by the contractor in time during execution. BHEL shall not supply any materials for this work.
5.1.1	Cement shall be as per Technical specification and BOQ item of the contract
5.1.2	Test certificates in respect of Cement for each consignment to be furnished and also to be tested as per FQP before use. The contractor shall submit the consumption statement of cement used in the works along with bill.
6.0	INSPECTION, TESTING AND INSPECTION CERTIFICATES
6.1	The engineer, his duly authorized representative and / or an outside inspection agency acting on behalf of BHEL / owner shall have access at all reasonable times to inspect & examine the materials & workmanship of the works during its manufacture and if part of the works is being manufactured or assembled on other premises or works, the vendor shall obtain for the engineer and for their duly authorized representative permission to inspect as if the works were manufactured or assembled on vendor's own premises or works. Necessary arrangement for carrying out inspection including supply of labour, IMTEs, area illumination and scaffolding, if required will be vendor's responsibility and same has to be carried out within the quoted price.
6.2	To facilitate advance planning of inspection in addition to giving inspection notice the vendor shall furnish quarterly inspection program indicating schedule dates of inspection at customer hold point and final inspection stages. Updated quarterly inspection plans will be made for each 3 consecutive months and shall be furnished before beginning of each calendar month.
6.3	Before any materials, plant / equipment leaves the place of manufacture, BHEL shall be given the option of witnessing inspections & tests for compliance with specifications & related standards. The vendor shall give the engineer / inspector 15 days written notice of any material being ready for testing. Such test shall be to the vendor's account except for the expenses of the inspector. The engineer / inspector, unless the inspection is waived will attend such tests within 15 days of the date on which the equipment is notified as being ready for test / inspection, failing which the vendor may proceed with test which shall be deemed to have been made in the inspector's presence and he shall forthwith forward to the Inspector duly certified copies of test reports.
6.4	The engineer or inspector shall within 15 days from the date of inspection as defined herein give notice to the vendor of any objection w.r.t. drawing / equipment / workmanship which in his opinion not in accordance with the specification / contract. The vendor shall either make modification as may be necessary to meet the said objection or explain to the engineer/ inspector giving reasons that no modifications are necessary to comply with the contract.
6.5	When the factory tests have been completed at the vendor's or sub-vendor's works, the engineer or

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	inspector shall issue a certificate to this effect within reasonable time after completion of tests but if the tests are not witnessed by the engineer or Inspector the certificate shall be issued within 15 days of the receipt of vendor's test certificate by the engineer inspector. Completion of these tests or the issue of the certificates shall not bind BHEL to accept the equipment should it on further tests after erection be found not to comply with the contract.	
6.6	In all cases where the vendor provides the tests at the premises of the vendor or any sub-vendor, the vendor except where otherwise specified shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by the engineer/ inspector to carry out effectively such tests on the equipment in accordance with the contract and shall give facilities to the engineer/ inspector to accomplish testing.	
7.0	INSURANCE	
	The contractor shall make available the original insurance cover(s) taken by him, against his T&P, assets and workmen compensation and any other cover as may be pertinent to his works and obligatory in terms of law, to BHEL for necessary verification in regard to their adequacy, before commencement of work. However, irrespective of such verification / acceptance, the responsibility to maintain adequate insurance coverage at all times during the period of the contract shall be of the contractor alone. Such insurance covers to be taken shall be in the joint names of the owner and the contractor. The contractor shall however be authorised to deal directly with the Insurance company(s) and shall be responsible in regard to maintenance of such insurance covers. Insurance covers to be taken by BHEL / Customer shall be as stipulated under GCC	
8.0	DEVIATIONS/ CLARIFICATIONS	
8.1	Normally no deviation with respect to tender is acceptable to BHEL. However, in case of unavoidable circumstances, the bidder may submit their query for seeking clarifications of BHEL as per modality stipulated in NIT or may submit the same along with his offer as per prescribed schedule/ format without any ambiguity. Any assumptions, presumptions, deviations etc. indicated or implied anywhere by the bidder except those indicated in the deviation schedule/ format will not be recognized and will not form a part of consideration / offer. In the absence of such filled-up schedule / format it will be understood and agreed that the bidder's offer is based on strict conformance to the specification and no negotiation would be allowed in this regard. BHEL reserve the right not to recognize any/ all deviations submitted after opening of the bid.	
9.0	DEWATERING	
9.1	Contractor shall ensure at all times that his work area & approach / access roads are free from accumulation of water, so that the materials are safe and the operation of plant / progressive delivery schedule are not affected. No separate claim in this regard shall be admitted by BHEL. No separate payments for dewatering of subsoil, surface water or catchments water, if required, at any time during execution of the work including monsoon period shall be considered by BHEL.	
10.0	TIME SCHEDULE/ COMPLETION PERIOD	
10.1	<p>The entire work under the scope of work shall be successfully completed in all respect as below:</p> <ol style="list-style-type: none"> 1. Supply of Concrete (Schedule-2): within 24 (Twenty-four) months from date of start of work, as certified by Construction Manager, BHEL. 2. Central testing laboratory (Schedule-2): within 60 (Sixty) months from date of start of operation, as certified by Construction Manager, BHEL. <p>Mobilization at site shall be done within 30 days from date of written intimation from BHEL. The exact date of start of work shall be reckoned based on certificate of Construction Manager, BHEL.</p>	
11.0	PRICE BID, CONTRACT PRICE & EVALUATION OF PRE-QUALIFICATION CRITERIA	
11.1	Bidders should quote prices in USD as per format, Volume-III provided in the tender. Bids shall be evaluated based on total price quoted.	
11.3	EVALUATION OF PRE-QUALIFICATION CRITERIA	
11.3.1	For finalising the value under Financial & Technical requirement of Pre-Qualification Criteria,	

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	following procedure to be followed for value other than INR/ USD/ BDT:	
11.3.1.1	Other currency shall be converted to USD at the selling Exchange Rate of USD as per State Bank of India (SBI) publication on tender floating date. If the date happens to be a holiday / or rate is not published, then the exchange rate of next day / next published day will be considered.	
12.0	TERMS OF PAYMENT	
12.1	<p>The contractor shall submit his running bill (RA bill) once in a month at the end of each month in line with payment terms / billing schedule indicated below. The RA bill complete in all respects accompanied by BHEL engineers certified / measurement sheet, jointly signed, will be paid after passing of the bill subject to completeness & correctness. The measurement will be taken as specified in terms & conditions of contract and certified by the BHEL engineer of actual work. However, no extra payment shall be made in the event of delay in release of payment.</p> <p>95% pro-rata monthly RA payment shall be considered for payment based on monthly work completion certificate to be issued by BHEL engineer as per approved BBU/Price Schedule.</p> <p>The payment shall be released within 60 days from the date of receipt of complete invoice along with all necessary documents including Engineering Certificate.</p>	
12.2	Out of above 95%, 1.5 % of gross bill amount shall be paid in the following manner on certification by BHEL engineer after compliance of each of following activity in each month. In case of non-fulfilment of respective activity by contractor in each month, no payment shall be made by BHEL against corresponding activity and no claim of bidder at a later date, whatsoever, in this regard shall be entertained by BHEL.	
12.2.1	0.7 % shall be paid on compliance of housekeeping of contractor's working area and store/ office areas.	
12.2.2	0.3 % shall be paid on compliance of general illumination of contractor's working area and stores, office area.	
12.2.3	0.2 % shall be paid on compliance of applicable OHSAS requirement as per guidelines of BHEL/ PSER and as specified in the tender.	
12.2.4	0.3 % shall be paid on compliance of applicable safety requirement as per guidelines of BHEL/ PSER and as specified in the tender.	
12.3	DELETED	
12.4	Balance 5% of contract value shall be paid against FAC (Final Acceptance Certificate) to be issued by BHEL / BIFPCL after completion of warranty period. However, if desired by vendor, this 5% may be released by BHEL against submission of equivalent amount bank guarantee as per Performance Bank Guarantee format, to be kept valid till warranty period, subject to the followings:	
12.4.1	(i) Receipt of certificate that all works are completed in all respects;	
12.4.2	(ii) Reconciliation of materials / T&P / MMD;	
12.4.3	(iii) Completion of final bill formalities and	
12.4.4	(iv) Handing over back of site / land to BHEL.	
12.5	Contractor shall make their own arrangement for making payment of impending labour wages and other dues in the meanwhile.	
12.6	Contractor have to submit BHEL entry gate pass for cement and other materials required for the work, in absence of which their corresponding RA bills shall not be processed.	
12.7	Subject to any deduction which BHEL may be authorized to make under the contract, the contractor shall on the certification of the BHEL engineer at site, be entitled to payment explained hereunder.	
12.8	The bills will be sent to BHEL, Site Finance for scrutiny and payment will be made after processing / verification only.	
12.9	The measurement will be taken by BHEL engineer as per relevant clause of GCC / specification	

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	and certify regarding actual work executed in measurement book and bills for work. However no additional payment shall be made in the event of delay in release of payment beyond the stated period.	
12.10	All admissible recovery / adjustment, etc. shall be made from interim payable amount.	
12.11	BHEL site at its discretion may split up percentage break up and effect payment to suit the site condition, cash flow requirement, according to the progress of work.	
12.12	<p>Payment shall be made in USD as per order. However for reasons, solely at the discretion of BHEL, if USD amount is not possible to be paid then BDT equivalent of USD will be paid at Buying Exchange Rate of USD (of our banker) as on the date of payment.</p> <p>The quoted / accepted price shall remain Firm throughout the contract period Including extension period, if any, without any escalation.</p>	
13.0	DELETED	
14.0	TAXES, DUTIES ETC	
14.1	<p>For Imports Bidder may please note that import for the project shall be in the name of our Employer / Owner of the Plant / Project and such import other than Office and Household Equipment shall be exempted from payment of Customs Duty, VAT & AIT. Hence successful Bidder is requested to furnish EXHAUSTIVE ITEM –WISE LIST OF IMPORTED MATERIALS for the instant jobs/ works to facilitate us to arrange the requisite papers for exemption purposes. Any documentation needed for availing of Duty Free Imports will be submitted by the bidder in reasonable time having regard to the time for delivery of the work and the time for completion.</p> <p>Temporarily imported erection materials, machineries and spare parts during construction period of Project are exempted from payment of Customs Duty and VAT. Such items shall be exported within six months from the commercial operation date. Documentation for the same to be submitted / maintained by the bidder.</p> <p>Bidder shall quote their rates/ price inclusive of all taxes, duties in line with provisions as mentioned above etc. together with variation thereto during contract period including extension, if any. BHEL shall not release any additional payment in this regard.</p> <p>For domestically sourced / Execution BHEL will not deduct any VAT from Bidder's Gross Bill and such bidder need not to load any Output VAT in Bidder's quoted price. A.I.T unless Exemption Certificate from the appropriate authority/ authorities is/ are furnished under Income Tax Act of Bangladesh, shall be deducted at prevailing rates on Gross Invoice Value from the bills.</p> <p>For Both Imports & domestically sourced/ Execution. Except otherwise mentioned above all taxes, Charges, Royalties, Cess any State or Central Levy and other Taxes in or outside Bangladesh for materials supplied for the work and for the execution of the contract shall be borne by contractor and shall not be payable extra by BHEL.</p> <p>Bidder should have valid 12 digit TIN number in Bangladesh prior to start of work.</p> <p>The bidder is responsible for compliance of all relevant Tax Laws of Bangladesh and all other related places outside Bangladesh in connection with this contract and BHEL will not bear any such liability.</p>	
14.2	New tax & duties, if imposed subsequent to latest due date of offer submission, as per NIT & TCN, as applicable, by statutory authority after due date of submission of latest price offer and within the	

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	<p>contract period including extension, if any (provided reason for extension is not attributable to vendor), shall be reimbursed by BHEL at actual on production of relevant supporting document to the satisfaction of BHEL. However, the vendor shall obtain prior approval from BHEL before depositing new taxes & duties.</p> <p>Benefits and/or abolition of all existing taxes must be passed on to BHEL against new Taxes, if any, proposed to be introduced at a later date.</p>	
15.0	PROJECT MANAGEMENT/ CONSTRUCTION MANAGEMENT	
	To meet the need of construction management at site, contractor shall provide the following services within quoted / accepted rates.	
15.1	CUSTOMS CLEARANCE	
	<p>The Contractor shall be responsible for Bangladesh customs clearance of all materials, supplies, equipment, tools and other articles shipped into Bangladesh by him for the implementation of his works, including the food and the personal effects of the Contractor's personnel.</p> <p>All payment for clearance charge, storage charge, etc. which are imposed by the relevant agencies of the Government of Bangladesh, relating to the clearance of equipment, materials and Plant that will be incorporated in the Permanent Works or relating to the Temporary Works shall be borne by the Contractor. Further, if the Contractor is delayed in submitting necessary shipping documents to the Employer, the demurrage charges by the Port Authority will be borne by the Contractor.</p> <p>Tools and equipment and other equipment of the Contractor for use during construction but which are to remain the property of the Contractor and which are to be exported by the Contractor from Bangladesh at the completion of the Work shall be carefully documented and specially listed to facilitate both import and export. The Contractor shall determine prior to shipment the customs regulations applicable to this special case as well as normal import rules and regulations applicable. The Contractor shall also be responsible for inland transport by barge/ truck/train to the Site.</p>	
15.2	RECEIVING, TRANSPORTING, HANDLING AND STORAGE	
	<p>The Contractor shall receive, transport, handle, store and install all materials and equipment furnished under these specifications, or otherwise involved in the implementation of this Contract. It shall be the responsibility of the Contractor to determine the availability and capacity of transportation and unloading facilities (including for the transportation, delivery and receipt of all equipment, materials, Plant to the Site) and to make the required arrangements to secure the necessary facilities for the same.</p> <p>The Contractor shall be responsible for the prompt unloading of all equipment or materials. The Contractor shall pay any demurrage incurred due to delay in unloading and for any other reasons.</p> <p>The Contractor shall handle materials and equipment carefully to prevent damage or loss. The use of bare rope slings for handling will not be permitted unless specifically approved by the Engineer. Special handling devices shall be used when necessary to avoid damage.</p> <p>In addition the Contractor shall also comply with the requirements of Technical Specification with respect to the receipt, transportation, handling and storage.</p>	
15.3	PLATFORMS	
	Open platformsshallbeconstructedbytheContractor atleast50cmabovegrade and shall have adequate flooring and base structure to support the stored materials and equipment.	
15.4	INDOOR STORAGE	
	Indoor storage sheds shall be constructed by the Contractor by suitable means for keeping materials and equipment from contact with the ground and to protect it from the environment and outside atmosphere. Sensitive equipment (including inter-alia, electrical, I & C and other equipment) must be kept in dust proof and ventilated rooms and means have to be provided to maintain the moisture content at required levels, in accordance with Good Industry Practices.	

15.5	SHORING
	Shoring shall be provided by the Contractor to safely support materials and equipment not less than 30cm above the ground. The ground shall be compacted and concreted or asphalted.
15.6	WEATHER PROOF COVERINGS
	Weather proof and flame resistant sheeting of sufficient size for outdoor storage shall be provided by the Contractor. The sheeting shall be carefully placed and tied down to prevent moisture and wind from entering underneath the sheeting and to otherwise protect the equipment, materials and other Plant.
15.7	IDENTIFICATION OF CONTRACTOR'S EMPLOYEES, VEHICLES & BUILDINGS
	<p>The Contractor shall provide each of his employees and his Subcontractor's employees with a name tag bearing the picture, the name or initials of the employee, a serial number and the name of the Contractor. Each employee shall wear his badge visibly to the security personnel at any time.</p> <p>Subcontractor's employees with a name tag bearing the picture, the name or initials of the employee, a serial number and the name of the Contractor. Each employee shall wear his badge visibly to the security personnel at any time.</p> <p>All vehicles and large equipment furnished and used by the Contractor or his Subcontractors on the Work shall be clearly marked with the Contractor's or Subcontractor's business name. The Contractor's offices, stores, depots and other facilities shall also be clearly identified. The detailed requirements are defined in the Health, Safety and Environment (HSE) Plan of BHEL.</p> <p>The Contractor shall be liable for and shall provide all aspects of security and security measures for the Site, Employer's site offices and Employer's living accommodation, including guard services, transfer organizations and transport etc.</p> <p>Around-the-clock security presence and operational routine shall be maintained throughout the year. Passes and temporary identification permits shall be issued and examined and access to any part of the Site, the site offices and living accommodation shall be controlled and limited to those who have an authorization.</p>
15.8	EXPATRIATE PERSONNEL
	<p>The Contractor shall submit to Employer data of all personnel he intends to bring into Bangladesh for the performance of the Work. This data shall include the name and present address of each person, his intended assignment and responsibility in connection with the Work and a concise resume of his experience in the type of work to which he will be assigned. This data shall be submitted to the Employer at least thirty (30) days prior to their expected arrival in Bangladesh.</p> <p>Any expense associated with illness of the Contractor's personnel, including replacement thereof, shall be to the Contractor's account.</p> <p>Costs of passports, visas, travel documents, inoculations and other incidental expenses incurred by the Contractor's non-Bangladesh employees and their dependents occasioned by travel to and from Bangladesh shall be borne by the Contractor.</p> <p>All accommodation and amenities for the Contractor's personnel and families (including all staff and labour) must be provided by the Contractor, and the Employer shall not have any liability for the same.</p>
15.9	SAFETY
	The Contractor shall comply with all ordinances and regulations including, but not limited to, National, State, Municipal laws and Department of Labour, Transmigration and Co-operation Regulations, and other Applicable Laws that are in force in the locality of the Works and shall comply with any instructions that may be from time to time issued by Employer. The safety rules and regulations laid down in the Health, Safety and Environment (HSE) Plan are to be strictly adhered to.

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15.10	CONTRACT PLANNING AND CONTROL	<p>Before starting the Work at the Site, the Contractor shall submit the detail site management organization for approval by the Employer. Such proposals shall show clearly the Contractor's key personnel, classification and qualification with the detailed information and curriculum vitae for above key personnel.</p> <p>The Contractor's Representative, site manager and senior key personnel who will be responsible for working closely with the Employers staff to achieve efficient execution of the Contract shall be competent to conduct meetings and communications in the English language.</p> <p>The management organization shall include a planning and programming tools covering the Work, and shall apply the latest techniques in communication and analysis. The Contractor shall nominate a planning engineer to co-ordinate all planning activities.</p>
15.11	RELEASE OF INFORMATION	<p>The Contractor shall not communicate or use in advertising, publicity, or sales release, photographs or other reproductions of the Work under this Contract, or descriptions of the size, dimensions, quantity, quality, or other information concerning the Work unless prior written permission has been obtained from the Employer.</p>
15.12	SAFETY AND ACCIDENT PREVENTION	<p>It shall be the Contractor's responsibility to maintain throughout the construction period, a safety and accident prevention program satisfactory to the Employer which meets the requirements of Applicable Laws and of all other Governmental Authorities authority having jurisdiction over the Works. The rules and regulations laid down in the Health, Safety and Environment (HSE) Plan must be adhered to at all times.</p>
15.13	SECURITY	<p>The Contractor shall be solely responsible for the security of all equipment and materials incorporated or to be incorporated in the Work by him and all equipment, materials, tools, supplies, structures, facilities and others properly used in the execution of the Work while in his care and custody.</p> <p>The Contractor shall conformal so to any specific security requirements of Employer but such compliance shall not relieve the Contractor from the total responsibility for security.</p>
15.14	HOUSING &TRANSPORT	<p>The Contractor shall arrange for suitable housing units together with furnishing and utilities in the close proximity of the construction Site for accommodation of all his expatriate personnel. If the services of any expatriate personnel of the Contractor or its Subcontractors.</p> <p>If the Contractor decides in consultation with the Employer that the health or safety of any of his personnel is or might be jeopardized by political or health hazards in Bangladesh, the Contractor may, after forty eight (48) hours' notice, order its employees and the employees of its Subcontractors and suppliers to return to their headquarters or other safe location, in which case the Work will be deemed to be suspended for the duration.</p> <p>The Contractor shall provide to the extent agreed transport vehicles for use during construction period by the expatriate as well as local personnel.</p>
15.15	PROPRIETARY NAMES	<p>Whenever a material or article is specified or described on the plants by using the name of a proprietary product or by using the name of a particular manufacturer or vendor, the specific item mentioned shall be understood as establishing the type, function and quantity desired. Unless</p>

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	otherwise specified, other manufacturers' products which in the opinion of the Employer are equivalent of those specified will be accepted. Such items shall be submitted for approval prior to their incorporation in the Works.
15.16	<p>PERFORMANCE OF THEWORK</p> <p>The Contractor shall conduct all Works in such a manner as to cause the least possible disturbance or damage to the environment. In cases where some temporary disturbance or damage is unavoidably caused due to the nature of the work, the Contractor shall, as soon as possible, remove the cause of such temporary disturbance, repair the damage and, in general, restore the affected areas to their original condition to the extent possible, and in a manner satisfactory to the Employer, the landowner and any authorities.</p> <p>Prior to commencement of the Work, the Contractor shall provide details of its EMP specifically addressing the following: Environmental management system and manual – policies, standards and procedures, and programs; organization / responsibilities;</p> <p>Training Incident and accident investigation; Management support; Environmental protection, mitigation and restoration; Emergency preparedness and response;</p> <ul style="list-style-type: none"> • Socio-economic plans, including historical and cultural resources; • audit, monitoring and corrective action; • information and records management; and, • Integration of safety & health requirements with the EMP. <p>All aspects of the EMP and the environment work requirements are the Contractor's accountability and the Contractor, its management and its Site supervisory staff will be held responsible for its implementation.</p> <p>All relevant Health, Safety and Environment (HSE) issues, results of audit and monitoring plans and programs, and HSE performance indicators will be communicated to the Contractor's management and the Employer through daily inspection meetings and reports, weekly construction meetings, monthly meetings, and in terms of the monthly project report.</p> <p>The Contractor shall ensure that he has complete knowledge of all the laws, statutes, statutory instruments, regulations, rules, treaties and conventions (by whatever name or title), environmental protection regimes and other Applicable Laws, in each of the jurisdictions where he shall perform the Work. The Contractor shall also take all necessary measures to protect the atmosphere, ocean, rivers, groundwater, seaports and land from pollution. In any event the Contractor shall promptly use its best efforts to eliminate and clean up any pollution caused, directly or indirectly, by the Contractor or which occurs at the Site, or other sites associated with this Work.</p> <p>The Contractor shall cooperate in all respects with any participant environmental representatives and</p>

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	with governmental persons, and allow them to inspect any and all equipment or operations that they wish to observe. The Contractor shall, at all times, be ready to discuss the implementation of the Contractor's safety, health and environmental protection program.
15.17	<p>INSTRUCTION TO WORKERS (ORIENTATION / INDUCTION)</p> <p>The Contractor shall ensure that all employees, subcontractors, servants and agents (and employees, servants and agents of all Subcontractors) participating in the Work, are advised about the strategy and plan for managing the environmental-social issues related to the work, and on their role and responsibility; instructed on the requirements of environmental laws, rules, regulations and specific permit conditions applicable to the area and the Work; instructed on the application and use of the required personal protective equipment (PPE) for their job duties and functions; and, have received the appropriate training in the use, application and maintenance of PPE.</p>
15.18	<p>RISK MANAGEMENT</p> <p>The Contractor shall clearly state the management methods and techniques to be used to identify potential hazards and risks at any stage prior to the execution of a particular activity. If required, specific procedures shall be developed by the Contractor to eliminate or mitigate the hazard to a safe level prior to the work being authorized. All requirements of the project's environmental impact assessments ("EIA") and other relevant assessments and conditions of approvals accorded by the relevant Governmental Authorities must be considered by the Contractor in the development of the Contractor's Health, Safety and Environment (HSE) Plan, EMP and other related/relevant plans. The Contractor is required to implement a system whereby all risks associated with hazardous substances, whether chemicals, by-products, effluents or waste materials, are minimized and/or eliminated. In conjunction with its emergency plans and procedures, the Contractor shall develop and submit to the Employer's Representative a "Safety Philosophy Document" that details the strategy to be adopted for control and shutdown systems, including alarms and programmable electronic control systems.</p>
15.19	<p>EMERGENCY PREPAREDNESS, RESPONSE & CONTINGENCY PLAN</p> <p>The Contractor shall prepare an Emergency Preparedness, Response and Contingency Plan (a detailed program of action to minimize the effects of an abnormal event requiring prompt actions beyond normal procedures to protect human life, minimize injury and safeguard the environment) for environmental and personal safety emergencies or incidents. This plan shall be found within the Contractor's Safety & Health and/or Environmental Programs. The purpose of the plan shall be to limit insurance and damage to people, property and the environment respectively. The plans, procedures, and trained personnel shall be in place for the duration of the Contract to manage and control emergency situations and incidents in a proper and expeditious manner.</p>
15.20	<p>SERVICING AND FUELLING</p> <p>To ensure adequate response capability in the event of a fuel, ground spill or other spill, all fuel transport vehicles and the Contractor's foreman vehicles shall carry a suitable amount of commercial absorbent material. In addition, floating absorbent pads and booms for spill clean- up on open water shall be kept accessible on the construction Site.</p> <p>All service vehicles and/or equipment utilized for re-fuelling must be equipped with automatic shut-off valves. All equipment or servicing activities with the potential for accidental spills (e.g., oil changes, hydraulic repair, coolants) will require appropriate containment methods to be in place (i.e., storage containers, impervious liners, absorbent materials, etc.) prior to the start of the activity.</p>
15.21	SOIL AND GROUND WATER PROTECTION

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	<p>The Contractor shall develop and implement soil and groundwater protection measures. Protection measures shall include building and impervious floors, where appropriate. The Contractor shall make an assessment of groundwater quality prior to the start of construction and prior to commissioning to demonstrate to Employer's Representative that construction activities have not adversely affected the environment. Groundwater quality shall be monitored throughout the construction phase.</p>
15.22	<p>HEALTH HAZARDS</p> <p>Worker and public health is a critical part of any HSE management program. The Contractor shall control substances and materials that may be a hazard to worker's health. These controls shall be a combination of hazard communication, safe work systems and the controlled handling and disposal of hazardous materials. The Contractor's controls shall commence at contract preparations and procurement stages, where all vendors and subcontractors shall be required to submit Material Safety Data Sheets ("MSDS") for all hazardous materials that will be supplied, provided or brought onto the Site. These MSDSs shall be forwarded to Contractor's HSE Manager for review and records management.</p> <p>In the event hazardous materials are to be used, the Contractor shall carry out assessments according to recognized international standards, to determine if there are any more suitable or less hazardous materials that could be substituted for the original materials. Only when the Project Manager, Employer and his Engineer and the Contractor are satisfied that assessments have been completed, and control measures are adequate to protect worker health, the materials shall be allowed on the project worksite. The Contractor's control measures shall include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Material transport, storage, labelling, packaging, and disposal, <input type="checkbox"/> Personnel protective equipment (PPE), <input type="checkbox"/> Health surveillance and monitoring, and <input type="checkbox"/> Emergency procedures and training. <p>All explosive materials to be used for blasting during Site preparation shall only be handled by approved and qualified personnel. All explosive materials shall be stored in a secure, limited access sites, protected from workers and the public, and removed from the site every day and immediately after use.</p> <p>All radioactive equipment and materials shall only be used by qualified, approved and permitted personnel. Radioactive materials must be stored in approved and protected containers. Radioactive materials and waste products shall not be disposed of on-site but removed in protective containers and disposed at government approved storage and disposal sites</p>
15.23	<p>WASTE MATERIAL MANAGEMENT</p> <p>The Contractor shall ensure that waste management identification, handling, transport and disposal are addressed in the development of their HSE management plans.</p> <p>The Contractor's employees responsible for handling hazardous materials (including wastes) shall receive training and certification in the handling, transport, storage and disposal of chemicals and regulated or hazardous materials. Where applicable, Workplace Hazardous Materials Information</p>

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	<p>System (“WHMIS”) certification and training, or its equivalent, shall be made available to employees. Regular written updates shall be included for continued employee awareness.</p> <p>The Contractor shall ensure proper segregation and isolation for wastes that could react together in the event of a leak or other incident. These facilities shall include lockable, fire proof cabinets or storage in shelving units separated by fireproof barriers or walls.</p> <p>The Contractor shall dedicate a space for waste and drum storage. The storage area must be easily accessible for spill containment and emergency response and not be susceptible to flooding.</p> <p>For any waste storage area which could accumulate hazardous gases, vapors, or dust due to the nature of the wastes stored, the Contractor must supply suitable ventilation or other controls to ensure exposure by employees is kept below required minimum standards. Storage areas for hazardous wastes shall be designated as restricted areas and shall be suitably equipped to control an incident involving a leak or spill.</p> <p>The Contractor shall make available suitable fire extinguishing equipment and proper electrical bonding equipment in all areas involving the handling and storage of flammable and reactive wastes.</p> <p>Disposal of wastes by burning will not be allowed on the construction site.</p> <p>Sumps and waste pits shall not be used for waste storage at the work site. Sumps should only be used for temporary control and containment of spills, equipment leaks, etc. If the Contractor encounters former sump sites or waste pits during ground surveys, the Contractor shall be identify and investigate the same. If any contamination is suspected, the Contractor shall excavate, remove and where required replace with an approved sump container system.</p> <p>The Contractor shall develop and implement a waste disposal control system. This system shall control every load of waste leaving the worksite, detailing the type of waste disposal, waste origin and destination, approximate weight, date and transport details on a waste manifest/document. These documents shall be audited.</p>
15.24	<p>SPILL RESPONSE AND CONTROL</p> <p>All spills shall be stopped and cleaned up immediately to avoid potential impact to water and soil quality. All spills shall be reported using the Incident Management Process. Under no circumstance contaminated material may be “stored” on the work site.</p> <p>All spills shall be rapidly stopped and appropriately eliminated as defined in the Contractor’s Emergency Preparedness, Response and Contingency Plan. Spills shall be contained in a way that will prevent their redistribution. All ground spills shall be contained as quickly as possible through diking, suction methods, excavation and the use of absorbents or other appropriate recovery techniques.</p> <p>A list including the type, quantity and location of the storage of retaining and clean up equipment to be used during construction shall be prepared. The list shall include the procedures and mitigation measures to be used in case of a spill. A written inventory will also be prepared, before starting construction works, including lubricants, fuels, solvents, chemicals and other materials that might be accidentally discharged during construction.</p> <p>All on-site fuel storage tanks shall be located in an impermeable secondary containment area with a</p>

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	<p>holding capacity equal to 110% of the largest tank within the berm. For above ground tanks, the tanks shall be surrounded by a berm, the entire area covered with a suitable commercial absorbent material and with a sealed plastic liner to form an area that can be pumped out in the event of a leak in the tank. A waste handling plan shall be made with the purpose of identifying the procedures necessary for cleaning and disposing of residues from a major spill. In the event of a spill, the Contractor shall make all resources available to contain and clean up the spill. Traffic shall be minimized in and around the spill site.</p>	
15.25	<p>NOISE CONTROL</p> <p>Noise level specifications to be followed by the Contractor in design, assessment and monitoring activities are based upon the maximum (acceptable) levels which plant personnel may be exposed during their normal working duties. The Contractor shall be familiar with and comply with the environmental guidelines as issued by the relevant Governmental Authorities in Bangladesh, including the Department of Environment, Government of Bangladesh and other relevant Applicable Laws.</p> <p>All internal combustion motors of vehicles, machinery and equipment used during the construction phase, shall have adequate noise silencers, and shall be kept in good operating conditions, during the entire construction period. Where temporary noise pollution of greater than 85 dBA will occur, temporary silencers shall be used. Equipment noise should not exceed the specified limits at accessible locations.</p>	
15.26	<p>CONSTRUCTION TRAFFIC PLANNING</p> <p>The Contractor shall ensure that the construction Site is organized in such a way that pedestrians can move safely and without risk. The Contractor shall firstly select the lowest period of traffic flow for equipment crossings; and secondly, ensure that traffic patterns and entrances to private and public roads for access are not obstructed during construction activities. All site entry will be controlled by vehicular passes. Road closures, on-site and off-site, shall be with the approval of the Contractor's site manager and/or road closure permit. Site traffic shall be minimized and speed limits posted and enforced.</p>	
15.27	<p>HOUSEKEEPING</p> <p>All construction debris and other garbage shall be continuously collected and disposed at an approved facility. At the end of each day, all waste material shall be removed from the construction Site and deposited at the approved allocated area. The approved procedures to manage waste shall be specified in the Contractor's waste management plan. All empty hazardous material containers shall be removed from the work area as soon as is practicable. All empty gas containers and bottles shall be returned to their storage area and secured properly.</p> <p>The Contractor's shall prepare a pest and vector control program to address specific site conditions, including a mosquito control program.</p>	
15.28	<p>CONSTRUCTION CAMPS</p> <p>The location of work places, camps, areas of storage and installation of works, compression, regulation and communication stations shall be located on levelled land, avoiding areas with non-cohesive soils to avoid erosive processes.</p> <p>Health conditions in the camp shall be controlled in order to prevent contamination of adjacent groundwater or surface water resources. Domestic sewage generated at the construction sites shall be eliminated by two systems of septic/absorption tanks or chemical toilets located on the sites.</p> <p>Solid combustible garbage shall be collected and secured daily, until disposal, to prevent the</p>	

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	<p>attraction of livestock, vermins and wild animals. Residue shall be disposed of, along with non-combustible garbage, in a disposal location approved by the Authorities.</p> <p>Upon abandonment, the camp site area shall be cleared of all trailers, piping, cable, insulation, lumber, blockage, metal wastes, etc., and re-graded according to the landscaping concept. These guidelines and procedures for the management of domestic and other waste shall be specified in a plan.</p>	
15.29	SITE REGULATION MANUAL	
	<p>The Contractor shall thirty (30) days prior starting any Work at the Site furnish a detailed and comprehensive site regulation manual for its proposed operation and works on the Site, which shall be based on the site related regulations and requirements in the Contract and which shall be subject to Employer's approval. All work on the Site, shall be carried out in compliance with the so approved site regulation manual.</p>	
15.30	PLANNING & MONITORING	
15.30.1	<p>The bidder shall prepare detail work schedule (L-3) as per the requirement given in this document. This schedule must include all material procurement, Tools & Plant, manpower etc. deployment with key activities for each subsystems / components. This network must conform to the overall project schedule. The bidder should also ensure monitoring of these activities at least weekly basis to start with and on daily basis whenever required by BHEL.</p>	
15.30.2	<p>The bidder shall also prepare progress report indicating progress on key activities, management summary for critical activities and list of actions requiring attention of BHEL. This schedule is to be preferably made in MS PROJECTS, so that the same is compatible with BHEL's project management software.</p>	
15.30.3	<p>The bidder will have to supply & install of 5 Nos. PCs (multimedia PC work station Pentium- Core-i5 / i7, 3.2 GHZ or above, 1000 GB HDD, 8 GB RAM, 100 /1000 MBPS LAN card) of HP / HCL / COMPAQ/ ZENITH or equivalent make with window 10 or higher, 64 bit O/S and required software like MS Office 2010 or higher, AutoCAD 2014 or higher, PageMaker, ADOBE PDF CREATOR with 2 Nos. laser jet printer cum scanner compatible for A3 size printing (ink/ cartridge for which to be supplied as and when required), 2 nos. laser jet Colour printer compatible for A4 size Colour printing (ink / cartridge for which to be supplied as and when required), 1 no. Scanner compatible for A4 size (HP Scanjet Enterprise Flow 7500 or equivalent). All computer with power backup at places, as per instruction of BHEL for exclusive use of BHEL.</p> <p>These computers / printers shall remain contractor's property and they will be allowed to take out the same after completion of contract period. The contractor shall provide data / information etc. in prescribed formats for periodical updating of the progress reports, material management reports, updating of network pertaining to the contractor's scope of work etc.</p> <p>The contractor shall also provide 5 (five) computer operators and 5 (five) service staff for miscellaneous service for BHEL's use at site / Kolkata for reconciliation, progress review & day-to-day planning purpose, documentation etc. These facilities are to be provided within 30 days from LOI date till completion of scheduled contract period.</p> <p>If contractor fails to provide computer / printer / personnel as per requirement, for a continuous period of fifteen days or more, BHEL shall have the right to deduct the amount as per following rates</p>	

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	on prorata basis, from contractor's RA bill or any other dues. In case of splitting the contract between two suppliers in the 60:40 ratio, supply of above resources shall be governed as per clause no. 30 of SCC.	
15.30.3.1	@ USD 400 / month for each computer operator.	
15.30.3.2	@ USD 310 / month for each service staff.	
15.30.3.3	@ USD 500 / month for each set or part there of computer & printer.	
15.30.3.4	In the event of the contract period getting extended beyond the stipulated time for reasons not attributable to you, above services may either be withdrawn or retained as per instruction of BHEL. If services are retained, you will be reimbursed at the above 70% of the mentioned rate or actual +15%, whichever is lower, if the services of operator / service staff are being used by BHEL.	
15.30.3.5	The contractor's site office must have facilities of communications like Fax, E-mail, and telephone with STD facility within a month from LOI.	
15.30.2	PROGRESS REPORTING	
15.30.2.1	The bidder shall submit daily, weekly and monthly progress reports for work force, materials reports, consumables (cement, aggregates, admixtures etc.) report and other reports as per pro-forma considered necessary by BHEL. In case of any failure on contractor's part to comply with this, BHEL may at its discretion, consider to withhold part payment against their RA bills.	
15.30.2.2	The progress report shall indicate the progress achieved against planned with reasons indicating delays, if any, and shall give the remedial actions which the contractor intends to take to make good the slippage or lost time, so that further works again proceed as per the original program and the slippages do not accumulate and effect the overall program.	
15.30.2.3	The daily work force reports shall clearly indicate the work force deployed, category-wise specifying also the activities in which they are engaged.	
15.30.2.4	Weekly progress review meetings will be held at site during which actual progress during the week vis-à-vis scheduled program shall be discussed or actions to be taken for achieving targets. For discussions, the contractor shall present program of subsequent week. The contractor shall constantly update/revise his work program to meet the overall requirement.	
15.30.2.5	Periodic progress reviews on the entire activities of execution in respect of supply and works in scope of bidder will be held once in a month at Kolkata / site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.	
15.30.2.6	During the contract / extended contract period contractor shall take an average ten colour digital photograph / slides each month (not less than two per week) of the works during progress. In case of failure in providing such photograph in each month, an amount of USD 130 per month shall be deducted from contractor's RA bill.	
15.30.2.7	Successful bidder has to provide for electronic / computerized storing and re-production / printing / plotting of various data, log sheets, protocols, measurements etc. These may be stored in CD (as per requirement) and handed over to BHEL as per requirement.	
15.30.2.8	PHOTOGRAPHS The Contractor shall furnish to the Employer One (1) hard copies and two (2) soft copies in .jpeg or .pdf format on separate CDs/DVDs / Pen Drive of each photograph taken to show the equipments and T & Ps. Each photograph shall show upon its face, the date, the Contractor's name, and	

	description of the view taken. Photographs shall be taken to indicate the progress of the Work. Additional photographs shall be taken when and where required as directed by Employer and / or the Engineer. All photographs shall be not smaller than 120 mm by 150 mm in size.	
15.30.3	SITE ORGANIZATION	
15.30.3.1	The contractor shall maintain a site organization of adequate strength in respect of manpower, construction machinery and other implements at all time for smooth execution of the contract headed by a competent construction manager for site operations with sufficient level of authority to take site decisions. The vendor will submit organization chart (showing the name of SITE-IN-CHARGE) with individual bio-data indicating various levels of experts to be posted for supervision and execution, quality, material management, planning, safety, etc. The organization shall be reinforced from time to time, as required to make up slippage (if any) from the schedule without any commercial implication to BHEL. The organization chart is to be submitted within 10 days from the date of LOI.	
15.30.3.2	Following (minimum) engineering manpower with power plant construction background to be deployed at site by the successful vendor for their day to day supervision etc.	
15.30.3.2.1	Qualified safety officers with assistants (exclusive for safety supervision for project jobs).	Officer – One No. Assistant - One No.
15.30.3.2.2	Engineer & Supervisors for quality inspection.	One no Engineer Two supervisor
15.30.3.2.3	Planning Engineer (exclusively for planning)	One no. Engineer
15.30.3.2.4	Chemist / Quality engineer for Civil Laboratory(Must be conversion with BS / BS EN & ASTM Codes. Bio-data shall be submitted for approval of BHEL before 15 days of execution of work.)	Qualified Engineer (BE/BTech. /BSc. of relevant filed with minimum 3 years working experience) Payment shall be made as per item B.2 of price schedule 3 of work order
15.30.3.2.5	Laboratory Assistant / Asst. Quality engineer for Civil Laboratory (Must be conversion with BS / BS EN & ASTM Codes. Bio-data shall be submitted for approval of BHEL before 15 days of execution of work.)	Assistant - Two Nos. minimum for round the clock duty (24 hours). Payment shall be made as per item B.3 of price schedule 3 of work order,
15.30.3.3	Deputation of above man-power shall be jointly decided at site in line with requirement.	
15.30.3.4	Engineer / supervisor for other functions like store & purchase, material management, fin, administration etc. are to be provided as per site requirement and not considered above.	
15.30.3.5	In the event of non-deputation of engineer/ supervisor by the bidder as per above agreed schedule, BHEL shall reserve the right to deduct USD 800 per man-month for engineer, USD 650 per man-month for the supervisor / safety officer / chemist and USD 600 per man-month for safety supervisor from RA bills. Further induction of manpower regarding site supervisor & site engineer will be decided at site as per requirement without any financial implication.	
15.30.3.6	BHEL reserves the right to reject or approve the list of personnel proposed by the contractor. The persons whose bio-data have been approved by BHEL will have to be posted at site and deviation in this regard will not be permitted unless specific & reasonable justification is made.	
15.30.3.7	In addition to above, a well experienced qualified engineer to be designated, as 'Project Co-coordinator', shall be deployed by the contractor. Such engineer shall have adequate exposure on the job and shall remain fully involved in all planning activities, guidance etc. to contractor's own team during the complete execution period of contract.	
15.30.3.8	The contractor should also submit to BHEL for approval a list of T&Ps along with their fitness certificates. The tools & tackles shall not be removed from site without written permission of BHEL.	
15.30.3.9	The contractor should also submit network programs for the production of various grades of concrete. These networks shall show the BIFCL/ BHEL hold points, which have to be cleared by BIFCL/ BHEL, or their authorized representatives. These programs for the erection would clearly identify	

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	responsibilities of the contractor and BIFCL/ BHEL. It is the responsibility of the contractor to get the Networks approved by BHEL within four weeks of the date of finalization of award of work/ placement of LOI.
16.0	QUALITY CONTROL & QUALITY ASSURANCE
16.1	Contractor's engineers & supervisors shall be adequately qualified and also inclined to do a quality job. The quality assurance engineer shall co-ordinate all aspects of quality control, inspection, implementation of quality assurance procedures laid down in Quality Plan and technical specification by BHEL. He shall fill up quality assurance log sheets / formats and submit to BHEL for acceptance. The contractor shall fill up, maintain & preserve the quality records in computerized media. BHEL's authorized representative shall be given free access at all time to such quality related records etc. for inspection, review etc.
17.0	QUALITY ASSURANCE PROGRAMME
17.1	The contractor shall arrange for suitable quality assurance programme to control all activities pertaining to the scope of work, as necessary. Such programs shall be outlined by the contractor & shall be finally accepted by BHEL. A quality assurance programme of the contractor shall generally cover the following.
17.2	Organization structure and qualification data for key personnel of the contractor for the management and implementation of proposed quality assurance programme
17.3	The procedure for source inspection, incoming raw material inspection, verification of material purchased etc.
17.4	System for maintenance of records.
18.0	GENERAL REQUIREMENTS – QUALITY ASSURANCE
18.1	All materials, and equipment covered under the specification shall be procured, manufactured, erected, commissioned and tested, as applicable, at all stages as per comprehensive quality assurance program. An indicative program for inspection / test, to be carried out by the contractor, for some of the major items is given in the respective technical specification.
18.2	Field quality plan will detail out the quality practices and procedures etc. to be followed by the contractor's site quality control organization, during various stages of site activities from receipt of material / equipment at site.
18.3	BHEL reserves the right to carry out quality audit and quality surveillance of the systems and procedures of contractor's quality management. Contractor shall provide all necessary assistance to enable BHEL to carry out such audit.
18.4	Quality audit / approval of the results of test & inspection will not prejudice the right of BHEL to reject an equipment service not giving desired performance and shall not in any way limit the liabilities and responsibilities of the contractor in earning satisfactory performances of equipment/ service as per specification.
18.5	All the latest relevant codes as per technical specification should be available with the contractor at site within 15 days from the date of placement of LOI or otherwise specified by Construction Manager/ Project Manager, BHEL.
19.0	HEALTH, SAFETY & ENVIRONMENT
19.1	REFER DOCUMENT NUMBER: HSEP:14-MAITREE: VENDOR Date: 05.05.2016
	DOCUMENT TITLE:HEALTH, SAFETY AND ENVIRONMENT PLAN FOR 2X660MW MAITREE SUPER THERMAL POWER PROJECT
19.2	The contractor shall also provide 2 (two) Qualified Safety Officer for BHEL's use at site for & day-to-day HSE & Safety review and planning. This facilities are to be provided within 30 days from LOI date till completion of scheduled contract period. Vendor has to submit the bio-data of safety officers for approval of BHEL within 15 days of LOI. In the event of non-deputation of Safety Officer, BHEL shall reserve the right to deduct USD 650 per man-month for each Safety Officer.

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20.0	SPECIFIC REQUIREMENTS FOR ISO 9002	
20.1	Contractors shall ensure that all their staff / employees are exposed to periodical training programs conducted by qualified agencies/ personnel on ISO 9002 Standards.	
20.2	Contractor shall ensure that the quality is maintained in all the works connected with this contract at all stages of the requirement of BHEL.	
20.3	Contractor shall ensure that all MMDs that are used, whether owned by the contractors or used on loan, are calibrated by the authorized agencies and the valid calibration certificate will be available with them for verification by BHEL. A list of such instruments possessed by the contractor at site with its calibration status is to be submitted to BHEL Engineer for control.	
20.4	Contractor shall ensure that fitness certificate of the tools & plants that are in use whether owned by contractor or taken on loan, are tested by authorised agency and the valid fitness certificate is available for verification by BHEL.	
20.5	Contractors shall arrange for the inspection of the works at various stages as required by BHEL. The contractors shall take immediate corrective action for the non-conformances if any, observed and pointed out by BHEL.	
21.	INTEREST BEARING RECOVERABLE ADVANCE/ MOBILISATION ADVANCE	
21.1	Interest bearing recoverable advance of 5 (five) % of the contract price in stages is admissible in the following manner. Interest rate shall be the base rate of SBI (on the date of release of advance) plus 6% (compound interest shall be calculated as per monthly rest).	
21.2	One and a half (1.5) % to be released on submission of following.	
21.2.1	Unqualified acceptance to LOI.	
21.2.2	Requisite security deposit.	
21.2.3	Bank guarantee (BG) equivalent to 1.1 times the advance amount valid for a period initially for one year subsequently to be extended till the advance is adjusted.	
21.2.4	Detailed L-2 network submission & approval by BHEL.	
21.3	One and a half (1.5) % to be released on following.	
21.3.1	Submission of bank guarantee (BG) equivalent to 1.1 times the advance amount valid for a period initially for one year subsequently to be extended till the advance is adjusted.	
21.3.2	Mobilization of Batching plant on certification of the same by BHEL site.	
21.4	Two (2) % to be released as per following.	
21.4.1	Submission of bank guarantee (BG) equivalent to 1.1 times advance amount valid for a period initially for one year subsequently to be extended till the advance is adjusted.	
21.4.2	Opening of site office & Laboratory on certification of the same by BHEL site.	
21.5	Recovery of mobilization advance along with interest shall be made at the rate of 10% of the Gross Bill Value from 1st applicable RA bill, till the amount paid along with the interest is fully recovered by the time the contractor reaches 90% billing of total value of works to be executed.	
21.6	The bank guarantee shall be kept valid till the entire advance amount is recovered.	
21.7	Invoice for advance against individual stage as per above to be raised immediately & prior to accomplishment of activities/ event, associated with subsequent stage advance.	
21.8	All other terms and conditions of IBRA not mentioned above shall be governed by the pertinent provisions of GCC of tender.	
22.0	OVER RUN CHARGES	
22.1	Not applicable in this tender.	
23.0	REVISION ON ACCEPTED CONTRACT RATE	
23.1	Not applicable in this tender	
24.0	PRICE VARIATION CLAUSE / ESCALATION	
24.1	Not applicable for this tender	
25.0	LIQUIDATED DAMAGES	
25.1	Since time is the main essence of the contract, the mobilization by bidder is to be	

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	made within the time limit prescribed in relevant clause of the tender. In case contractor fails to mobilize within the period specified in the contract, BHEL will reserves the right to levy liquidated damages at the rate of 0.5% (half percent) of the awarded contract value delayed for each week of delay or part thereof without prejudice to any other relief or compensation due to BHEL under any other conditions of the order subject to a maximum limit of 10% of total contract value. In case of delay in mobilisation of bidder, for reasons not attributable to BHEL, the 'Liquidated Damages' clause shall be strictly enforced, unless extension of delivery date is granted through an amendment to the work/ purchase order.
25.2	COMPENSATION FOR NON-PERFORMANCE
25.2.1	If the contractor fails to maintain the required production / supply of concrete in time for which delay occurs in the completion of the works, civil vendors suffers for non-availability of concrete in time and claim compensation for idle labour etc. BHEL shall have the right to recover the cost of compensation for idle labour etc. paid to the vendor with BHEL overhead up to 30%, limited to 10% of the contract value. The amount of such compensation from any money due or which may become due to the contractor and/or recover such compensation from the bank guarantees / security deposit of the contractor. To impose such compensation, BHEL will not be required to prove that BHEL has incurred such amount or proof of payment.
25.3	However the overall LD and Compensation for Non-Performance will be limited to 10% of Contract Value.
25.4	In case of any nonconformity observed during the execution of contract, BHEL reserve the right to cancel the whole order / contract or a portion thereof at the risk & cost of the contractor and the contractor shall be liable to BHEL for any excess costs thereof.
26.0	GUARANTEE / WARRANTY
26.1	The contractor will be responsible for the quality of concrete supplied, quality of materials / design of concrete mix. In case the concrete fail to give the required strength, the cost of re-test, demolition & other cost / charges shall be recovered from the vendor. Decision of Engineer in this regard is final & binding on the vendor.
26.2	Guarantee / warranty period shall be 3 months from the date of supply of concrete with submission of accepted test results of concrete specimens. Commencement of guarantee period shall be from the date completion of work under this contract as certified by BHEL.
27.0	EXTENSION OF TIME FOR COMPLETION
27.1	If the completion of work as detailed in the scope of work gets delayed beyond the contract / completion period due to reasons not attributable to contractor, the contractor shall make request for an extension of the contract and BHEL at its discretion may extend the contract. However such extension shall not entitle the vendor for price revision or price compensation as this being FIRM price contract.
27.2	Based on review of agreed & jointly signed L-3 / construction schedule (as enumerated in the tender), the balance work at the end of original contract period less the backlog attributable to the contractor shall be quantified, and the number of months of 'Time extension' required for completion of the same shall be jointly worked out. Within this period of 'Time extension', the contractor is bound to complete the portion of backlog attributable to contractor. Further 'Time extension' or 'Time extensions' at the end of previous extension shall be worked out similarly.
27.3	However if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty / LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.
27.4	A joint program shall be drawn for the balance amount of work to be completed during the period of 'Time Extension', along with matching resources to be deployed by the contractor as per specified

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	format. Review of the programme and record of shortfall shall be done.
27.5	During the period of 'Time extension', contractor shall maintain their resources as per mutually agreed program
27.6	At the end of total work completion as certified by BHEL engineer, and upon analysis of the total delay, the portion of time extensions attributable to (i) Contractor, (ii) Force majeure conditions, and (iii) BHEL, shall be worked out and shall be considered to be exhausted in the same order. The total period of time extensions shall be the sum of (i), (ii) and (iii) above and shall be equal to period between the scheduled date of completion and the actual date of completion of contract. LD shall be imposed/ levied for the portion of time extensions attributable solely to contractor after adjusting delay attributable to BHEL & Force majeure and recoverable from the dues payable to the contractor.
28.0	EARNESTMONEYDEPOSIT(EMD / SECURITY DEPOSIT (SD) / PERFORMANCE BOND (PB)
28.1	EARNESTMONEYDEPOSIT(EMD)
28.1.1	EMD is to be paid by tenderers for securing fulfilment of any obligations in terms of the NIT. EMD can be submitted in INR/ USD/ BDT for this tender. Buying Exchange Rate of currency as available in the web site of Bangladesh Bank on the tender floating/publishing date shall be considered.
28.1.2	In case of EMD submitted in USD by the successful tenderer, the same shall be converted and adjusted towards the required amount of Security Deposit of 50%. In case of EMD in INR, whole EMD shall be converted into USD as per stipulated Selling conversion rate of INR to USD as per State Bank of India (SBI) publication on tender floating date. In case of EMD in BDT, whole EMD shall be converted into USD as per stipulated Selling conversion rate of BDT to USD as per Bangladesh Bank publication on tender floating date.
28.1.3	If the date happens to be a holiday / or rate is not published, then the exchange rate of next day/ next published day as available in the website of Bangladesh bank will be considered. Irrespective of submission in any of the aforesaid modes, amount of refund of EMD shall be net of submitted EMD less applicable Bank charges.
28.1.4	EMD & Tender cost amount can also be submitted directly by Foreign Bidders (other than Indian bidders) to the following Bharat Heavy Electricals Limited bank account in Bangladesh- 1. SBI (Branch Address:-24-25, DILKUSHA C/A, DHAKA-1000, Branch Code 4984), A/C No. 05160293520001, BDT Account. 2. SBI (Branch Address:-24-25, DILKUSHA C/A, DHAKA-1000, Branch Code 4984), A/C No. 05160293510001, USD Account
28.1.5	EMD & Tender cost amount can also be submitted directly by Indian Bidders to the followings Bharat Heavy Electricals Limited bank account in India – 1. SBI (Branch Address:-Commercial Branch, Saltlake, Sector V, Kolkata, Branch Code SBIN0004289), A/C No. 11107800029, INR Account.
28.1.6	Amount of EMD exceeding INR 20 Lakh may be submitted in the form of Bank Guarantee (INR or eqv. USD).
28.1.7	All other terms & conditions shall be as per GCC.
28.2	SECURITY DEPOSIT(SD)
28.2.1	The total amount of Security Deposit will be 5% of the contract value and the same will be in the form of USD. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.
28.2.2	At least 50% of the required Security Deposit, including the EMD, shall be collected in before start of

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	<p>the work. Balance of the Security Deposit shall be collected by deducting 10% of the gross amount in USD progressively from each of the running bills of the Contractor till the total amount of the required Security Deposit is collected.</p> <p>If the value of work done at any time exceeds the contract value, the amount of Security Deposit shall be correspondingly enhanced and the additional Security Deposit shall be immediately deposited by the Contractor or recovered from payment/s due to the Contractor.</p> <p>The recoveries made from running bills (cash deduction towards balance SD amount) can be released against submission of equivalent Bank Guarantee in acceptable form, but only once, before completion of work, with the approval of the authority competent to award the work.</p>	
28.2.3	All other terms & conditions shall be as per GCC.	
28.3	PERFORMANCE BOND	
28.3.1	Performance bond is not applicable.	
29.0	CERTIFICATE TOWARDS COMPLETION	
29.1	The work under the scope of the contractor shall be deemed to have been completed in all respects only when so certified by BHEL / owner. The decision of BHEL in this regard shall be final and binding on the contractor.	
30.0	SPLITTING OF THE CONTRACT	
30.1	BHEL reserves the right to split the scope of supply of RMC (Total price for Schedule - 2 / Concrete), & other resources as specified under clause no. 15.30.3 of SCC, between L1 and other qualified bidders excluding the H1 (except in the case of two qualified bidders).	
30.2	Scope pertaining to sl no. 31. Of SCC & Schedule – 3 of price schedule i.e.Civil Laboratory, shall be non-splittable & shall lie with the L1 bidder only.	
30.3	Splitting of scope for supply of RMC, shall be on around approximately 60:40 ratio basis after getting L2/L3/L4 but except H1(except in the case of two qualified bidders), subject to bidders acceptance of the counter offered L1 price for supply of RMC (Total price for Schedule - 2 / Concrete). Sequence of counter offer shall be as per their respective ranking .In case of only two qualified bidder, BHEL shall reserve the right to split the scope for supply of RMC in the ratio of 60:40(Approximately) .	
30.4	In case of splitting the contract between two suppliers in the ratio of 60:40, as mentioned above, resources as specified in clause no. 15.30.3 shall also be provided in the ratio of 3:2 between L1 & other bidder.	
30.5	In case of splitting the tender, the stipulated ratio of supplies i.e. 60:40 basis for RMC from both the suppliers, shall be maintained & controlled by BHEL BANGLADESH MAITREE SITE.	
30.0	CIVIL LABORATORY	
30.1	Contractor shall establish and maintain civil laboratory with necessary equipment (as per Annexure-A) for conducting relevant tests at site, as required. Instruments used in Lab shall have valid calibration certificate from are calibrated by the authorized agency. The Laboratory building shall be of 67.5 Sqm (minimum) in area with false ceiling along-with air condition area of 27 Sqm. Raised platform (600mm wide) with stone / tile finished up to 1.0m high dado above platform level to be provided. At least 2 Nos. Computer, printer, scanner to be provided with required numbers of good quality table & chairs to be provided. Necessary electrical wiring for operation of various equipments and other use to be provided. Before start of construction of laboratory, the lay-out drawing shall be approved by BHEL engineer.	
31.0	CONSTRUCTION SCHEDULE	
31.1	Entire work shall be carried out in accordance with the broad supply schedule given below, within the stipulated period. Within 30 days of LOI, the contractor shall discuss with BHEL site engineer & furnish detail construction schedule (L-3/ L-4) indicating all major activities and get it approved from BHEL engineer. This schedule will undergo review and based on progress vis-à-vis project requirement, contractor shall have to submit revised schedule for approval of BHEL.	

31.1.1	SI no.	Major Milestone	Time from date of LOI / hand over of site which is applicable
	1	Repot to Construction Manager / BHEL Site	10 days
	2	Completion of Installation of 1 st Batching Plant.	50 days
	3	Completion of Installation of 2 nd Batching Plant.	60 days
	4	Completion of Installation of 3 rd Batching Plant	As per requirement.
	5	Completion of finalisation of Aggregate sources	30 days
	6	Completion of finalisation of cement sources	30 days
	7	Completion of finalisation & approval of Design Mixes of concrete	60 days
	8	Start of production of Concrete	65 days
31.2	Contractor shall establish mix design for all concrete grades by taking trial mix at site after submission of Design Mix of various Concrete grades or from authorized agency (As per BHEL / Customer approval). Contractor shall ensure adding of admixture and minimizing of cement content in line with relevant BS Code.		
31.3	The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL/ BIFCL engineer		
31.4	Contractor shall submit daily work program based on above construction schedule. Deferment of above schedule is not acceptable. Contractor will adhere to schedule and resource planning to be augmented to ensure completion as per schedule.		
31.5	Periodic progress reviews on the entire activities of execution in respect of supply & works in scope of contractor will be held once in a month at Kolkata / site. These meetings will be attended by reasonably higher officials of the contractor and will be used as a forum for discussing all areas where progress needs to be speeded up. The contractor shall be further responsible for ensuring that suitable steps are taken to meet various targets decided upon such meetings.		
31.6	Above schedule is indicative. The contractor shall plan his work in such a manner so as to meet the overall project schedule, in consultation with BHEL/BIFCL Engineer.		
32.0	LABORATORY EQUIPMENT		
32.1	You shall provide the equipment as per Annexure - A to carry out tests as per Field Quality Plan (FQP).		
32.1.1	Concrete Cubes shall be taken at site as per FQP / instruction of BHEL and the same shall be tested at Site / Govt. approved laboratory / Institution if required.		
32.1.2	Other than above mentioned test, any testing required to be carried out at site as per FQP / joint discussion at site and technical specification have to be arranged by you for all the works at your own cost		
33.0	MATERIAL HANDLING		
33.1	No material is envisaged to be issued by BHEL in this contract.		
33.2	However, all the materials (to be supplied by you as envisaged) are to be handled by you and you will be solely responsible for safe custody of the same.		
34.0	TOOLS & PLANTS (TO BE PROVIDED BY CONTRACTOR)		
34.1	Tentative list of T&P to be deployed by contractor for successful completion of work is detailed below. No T&P shall be provided by BHEL		
34.2	It may be noted that the list is not exhaustive and is only for general guidance. The contractor is required to provide all necessary T&P (other than those specified to be provided by BHEL, if any) measuring (calibrated) instruments & handing equipments to maintain work progress for timely completion of total work as per contract. In case of project requirement, some activities may have to pre-pone. In such cases the contractor may have to deploy additional T&P. Quoted rate shall be inclusive of such emerging requirements. However, contractor shall submit deployment plan of all T&P		

	along with tender bid.	
34.3	In the event of any failure on the part of the contractor to deploy T & P to sustain desired work progress, BHEL may at his discretion also terminate the contract on this ground and take out any or whole amount of the contract from the scope of the contractor. In the event of failure of contractor to deploy necessary and sufficient T&P/ IMTEs to maintain work progress, BHEL will be at liberty to arrange the same at the risk & cost of contractor including transportation cost of same from any of BHEL site/ other agency & charges as applicable shall be deducted from contractor's RA bill. Decision of BHEL in this regard will be final & binding on contractor.	
34.4	Following Major T&Ps to be deployed by contractor within the indicated time from date of LOI / hand over of site which is applicable.	
	Major T&P items	Deployment Schedule from LOI
34.4.1	1 No. 40'0" x 8'0" or 2 Nos. 20'0" x 8'0" office Porta Cabin	Within 30 days
34.4.2	1 no. dozer (D80)	Within 50 days
34.4.2	2 Nos. Pay loader/ Backhoe / JCB with minimum capacity of 1.2 Cum	Within 45 days
34.4.2.1	1 no Tire mounted Crane (10 / 12 T capacity)	Within 40 days
34.4.2.2	Welding rectifier –As per requirement	Within 30 days
34.4.2.3	One Nos. automatic batching plant with printing facility (Minimum Capacity 90 Cum/Hr.) – to be commissioned at site.	Within 50 days
34.4.3	One Nos. automatic batching plant with printing facility (Minimum Capacity 60 Cum/Hr.) – to be commissioned at site.	Within 40days
34.4.3	One Nos. automatic batching plant with printing facility (Minimum Capacity 30 / 45 Cum/Hr.) – to be commissioned at site.	As per requirement
34.4.4	1 Nos. transit mixer (4.5/5/6 M3 capacity)	Within 15 days after intimation by BHEL Site
34.4.5	1 No. dumper	within 40 days
34.4.6	2 Nos. self-priming water pump 5HP (diesel / electric)	1 no. Within 30 days balance within 60 days
34.4.7	2 Nos. self-priming water pump 2 HP or higher (diesel/ electric)	1 no. Within 30 days balance within 60 days
34.4.9	Civil laboratory equipments as per list attached in ANNEXURE-A with temporary building one AC lab size 4.5mtr x 6mtr and 1 non AC lab 9mtr x 4.5mtr.	Within 70 days of LOI
34.4.10	2 Nos. DG set 125KVA	1 no. Within 30 days balance within 60 days
34.4.11	Concrete compressive strength testing moulds– 125 Nos.	Within 50 days
34.4.12	1 no drinking water tank – 2000 lit.	Within 30 days
34.4.13	4 Nos. Portable High Mast for illumination with DG	Within 60 days
34.4.14	Portable fire extinguishers as below: Soda acid – 2 sets. Dry chemical powder – 2 sets CO2 – 2 sets. Water & sand bucket (4 buckets in one stand) – 2 sets. Fire hose with nozzle (50 M length) – 2 sets	Within 60 days
34.5	T&P shown in the above mentioned list are tentative based on planned progress requirement, construction schedule and material availability at site. It is to be reviewed and mutually agreed with CM, BHEL site periodically from time to time for mobilization of major T&Ps, and the same have to be adhered to. No change will be permitted without written approval of Construction Manager, BHEL site. Further requirement will be reviewed time to time at site and contractor will provide additional	

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	T&P/equipments to ensure completion of entire work within schedule time without any financial implication to BHEL. All other T&Ps shall be provided by the contractor without any extra cost to BHEL. Vendor will give advance intimation & certification regarding capacity etc. prior to dispatch of heavy equipments.
34.6	All T&P and all IMTEs, which are required for successful and timely execution of the work covered within the scope of this tender, shall be arranged and provided by the contractor at his own cost in working condition.
34.7	In the event of non mobilisation of any T&P by the successful bidder and as a result progress of work suffered, BHEL reserves the right to deduct suitable amount from the dues of the bidder, with assigning reasons thereof on market Rate.
35.0	OTHER TERMS
35.1	All other term & conditions of this specification shall be governed by the pertinent provisions of GCC and other volumes of this tender, as applicable.

ANNEXURE – A
LIST OF EQUIPMENTS FOR CIVIL SITE LABORATORY
CONCRETE TESTING EQUIPMENT

SL NO.	NAME OF TEST	NAME OF EQUIPMENT	No. & SIZE OF EQUIPMENT
1	Initial & final setting time, Consistency of cement	Vicat Apparatus with desk pot	Standard (3 Sets)
2	Shrinkage of cement, Auto Clave Test	Le Chatelier's apparatus Auto Clave Equipment	Standard
3	Abrasion value test	Los Angles Abrasion testing machine	Standard
4	Aggregate Impact value test	Aggregate Impact value testing machine with blow counter	Standard
5	Aggregate crushing value test	Crushing value apparatus	Standard
6	Flakiness index	Thickness gauge for measuring flakiness index	Standard
7	Elongation Index	Elongation gauge	Standard
8	Bulk density, voids and bulking apparatus	Measuring cylinders	3, 5, 10 & 15 liters cylinders
9	Rapid Chloride Permeability Test	3 cell Rapid Chloride Permeability Test instrument along with computer and printer and minimum 12 nos. aluminium / steel mould of size 100mm dia x 50 mm height	1 No. as per ASTM C 1202
10	Concrete Compressive test	Digital Compressive Testing Machine with 1000KN / 2000 KN capacity.	2000KN capacity (2nos), 1000KN (1No)
11	Permeability testing of Concrete	Permeability testing equipment of concrete	DIN 1048
12	Concrete steel cube mould.	Testing mould	100mm x 100mm x 100mm. Minimum 50 sets desired
13	Cement mortar cube casting		Minimum 30 sets desired.
14	Concrete Cube casting	Concrete testing Mould	Minimum 150 sets desired considering major concerting activity.
15	Concrete Cylinder Testing	Steel cylindrical mould	150mm dia. x 300mm. Minimum 50 Nos. mould.
16	Workability of concrete	Slump cone	Standard, at least 04 Nos.
17	Specific gravity of aggregates	Pycnometer	Standard, at least 02 Nos.
18	Potential meter	Half-cell potential meter	As per ASTM C 876. 1 nos. (Copper sulphate based)
19	Cement mortar cube vibrating	Motorized vibration machine for cement testing	Standard
20	Course aggregate Sieve analysis (Concrete & Road Works)	Sieve set	450mm dia GI Frames Size: 125 mm, 90 mm, 75 mm, 63 mm, 53 mm, 40 mm, 20 mm, 16 mm, 12.5 mm, 10 mm, 4.75 mm, Pan and cover (2sets)
21	Fine aggregate sieve analysis	Sieve set	Minimum 200 mm dia Brass sieves; Size 4.75 mm, 2.36 mm, 1.18 mm 600 micron, 300 micron, 150 micron, 75 micron, 75 micron, Pan and cover (2

			Sets)
22	Sieve Shaker	Motorized Sieve shaker	Mfg. Catalogue
23	Silt content check	Sand silt content beaker	Standard
24	Rapid Curing System	Curing Chamber	Standard
25	Electrical Resistivity test of Concrete	Electrical Resistivity meter	Standard 1 nos.
26	Carbonation Chamber	Size 350 mm x 350 mm x 350mm, having CO2 supply maximum 3% & humidity 60 to 70%.	Standard
27	UPV Test of Concrete	With two types of transducer. Normal type of 54KHZ and Exponential transducer of 54KHZ. Cable length of minimum 10mtr and 3mtr respectively.	Make Proceq

SL NO.	NAME OF TEST	NAME OF EQUIPMENT	SIZE OF EQUIPMENT
Soil Testing Equipment			
1	Liquid limit test	Liquid limit apparatus	Standard
2	Core Cutter test	core cutter apparatus	Rammer, 10 Nos. of standard core cutter mould, dolly
3	Proctor density test	Standard proctor Compaction apparatus	Standard
4	Moisture Content	Rapid moisture meter	Standard, at least 02 Nos.
Process Control Accessories			
1	Hot air oven	Temperature range 50°C to 300°C	600x600x600mm (2 Nos. minimum. Size)
2	Hot Plate	2000 W	02 Nos.
3	Electronic balance	3 Nos.	600g x 0.01g, 10g and 50 kg
4	Physical balance	5 kg capacity / 10 kg capacity	Weights up to 5 kg/ 10 Kg (3Nos)
5	Physical balance	150 kg capacity	(1 No)
6	Thermometer	Temperature range 0°C to 150°C	Digital 02 Nos.
7	Poker Thermometer (Concrete Road)	Temperature range 0°C to 50°C & 150° C	02 Nos. each required
8	Measuring jars	2 Nos. set of each size	100ml, 200ml, 500ml & 1000 ml
9	Gauging trawlers	4 Nos.	100mm & 200 mm with wooden handle
10	Spatula	2 Nos. each size	100mm & 200 mm with long blade wooden handle
11	Stainless steel scoop	52 Nos. each	2 kg and 5 kg
12	Venire calipers	2 Nos. each	12" and 6" Sizes
13	Digital pH meter	03 Nos.	.01 mm least count
14	Digital micrometer	02 Nos.	0.01 mm least count
15	Digital paint thickness meter for steel	02 Nos.	500 micron Range
16	GI tray	02 Nos. each	600x450x50mm, 450x300x40mm, 300x250x40mm
17	Electric mortar mixer	01 Nos.	0.25 CUM capacity
18	Rebound hammer test	01 Nos.	Digital Rebound hammer
19	Screw Gauge	02 Nos.	0.1 mm-10mm, Least count 0.05mm
20	Dial Gauge with magnetic base	08 Nos	25mm with least count .001 mm

Any other equipment required for testing of materials as per FQP, contractor has to provide within the quoted rate.

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NOTE :

LIST OF TENTATIVELY APPROVED SUPPLIERS PROVIDED HEREUNDER. HOWEVER, IN CASE THE BIDDER PROPOSES TO PROCURE ITEMS FROM OTHER SUPPLIERS, SPECIFIC APPROVAL SHALL BE REQUIRED TO BE TAKEN FROM BHEL/BIFPCL AS PER APPROVED QP. FURTHER BIDDER MAY NOTE THAT LIST CONSISTS OF ONLY TENTATIVELY APPROVED VENDORS. SPECIFIC APPROVAL MUST BE TAKEN FROM BHEL/BIFPCL PRIOR TO EXECUTION AT SITE.

SL. NO.	ITEM	PROPOSED SUB SUPPLIER
1	CEMENT	CCI
		GUJARAT AMBUJA
		JK LAXMI
		JAYPEE
		GRASIM
		BIRLA
		LAFARGE
		ACC
		SHREE
		INDIA CEMENT
		PENNA CEMENT
		MADRAS CEMENT
		PTISM
		ULTRATECH
		ORIENT
		MANCHERIAL
		JSW
		ANDHRA CEMENT
		PARASHAKTI
		SAGAR
		MAIHAR
		HOLCIM BD LTD.
		MANIKGARH
HEILDELBERG CEMENT		
MEGNA CEMENT		
SHAH CEMENT		
CROWN CEMENT		
EMIRATE CEMENT		

ANNEXURE-VII

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR EASTERN REGION
KOLKATA

PRICE SCHEDULE (PRICED)-REV-01

VOLUME-III

PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.

TENDER DOCUMENT NO - PSER:PUR:PMX-350:044(ENQ:17:PP:0015:PUR:56) Date: 12/06/2017

PREAMBLE

1	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully before filling in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender and other tender sections as applicable and shall have precedence over any contrary statement mentioned any where in this document.
2	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. Drawings enclosed with the tender are only preliminary and for tender purposes and giving some idea of the work involved. The work is to be executed as per drawings & documents, which shall be furnished during execution.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4	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 (except service tax), 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 complete tender document and this schedule.
5	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains within fifteen percent ($\pm 15\%$) of the awarded price as per LOI.
6	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and / or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order.
7	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing, clearing of old structures 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. However, if separate rate for such item is available in the rate schedule, the same shall be considered.
8	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.
9	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.
10	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
11	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/ altered by them. Also putting any comments instead of rates/price in the designated column of the rate schedule shall make the offer liable for rejection.
12	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.
13	In case if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of BPWD schedule as prescribed in the tender / BOQ cum Rate Schedule.
14	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor.
15	Size and weights of various items are mentioned in the attached BOQ cum rate / price schedule for reference purpose only & these shall not be taken into consideration for quoting / calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender.

ANNEXURE-VII

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR EASTERN REGION
KOLKATA

PRICE SCHEDULE (PRICED)-REV-01

VOLUME-III

**PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL
UPAZILA, BAGHERHAT DISTRICT, BANGLADESH.**

TENDER DOCUMENT NO - PSER:PMX-350:044(ENQ:17:PP:0015:PUR:56) Date: 12/06/2017

SCH-1 : TOTAL PRICE

SL NO	DESCRIPTION	TOTAL QUOTED PRICE (IN USD) (IN FIGURES)
1.0	Total price for Schedule - 2 / Concrete	(IN WORDS)
		(IN FIGURES)
2.0	Total price for Schedule - 3 / Civil Laboratory	(IN WORDS)
		(IN FIGURES)
3.0	TOTAL AMOUNT	(IN WORDS)
		(IN FIGURES)
4.0	NON-SCHEDULE ITEM Quote % above or % below for items not covered as above of this schedule. The rate shall be derived from Schedule of Rates 2014, PWD, Govt. of Bangladesh	
4a)	Rate of complete item	_____ % above/ _____ % below of BPWD Rate Schedule 2014
4b)	Rate of supply of material at site only	_____ % above/ _____ % below of BPWD Rate Schedule 2014
4c)	Rate for execution complete excluding supply of materials.	_____ % above/ _____ % below of BPWD Rate Schedule 2014
NOTE		
1.0	Bidder shall quote total price of SCH-2 CONCRETE at SI no 1 & SCH-3 CIVIL LABORATORY at SI. No. 2 above. All other amounts/ rates of each item of works in respective schedules/ parts will be derived based on allocated percentages. As such, any uncalled figure/ amount noted at any other place / schedule of Volume-III will not be reckoned & will stand null & void.	
2.0	Bidder to note that total price at SI no 3 above shall be considered for evaluation & awarding. As such grand total price should be complete in all respect for the full scope defined and considering all terms and conditions.	
3.0	Bidder's quoted total price of SCH-1 at SI. no 1 & 2 above shall be apportioned into amount of various items of works based on allocated percentages against respective item of SCH-2 & 3. As such, bidder shall not indicate/ quote any amount / rate in these schedules / parts and any amount / rate quoted against any item shall not be taken into cognizance / account and offer may be liable for rejection.	
4.0	Based on the itemwise percentage allocations, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items after rounding off .	
5.0	Unit rates of each item of works of respective schedules / parts will be derived by dividing derived amount by corresponding quantities. In deriving the unit rates of each item in this manner, figures only upto 2 decimal places will be taken into account. Any adjustment, if required, due to such methodology, will be effected in final bill.	
6.0	Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate.	
7.0	Any item as per scope of work, if not included in the price quoted above and shown separately will not be taken cognizance of and the offer shall be liable for rejection.	
8.0	Price format shall not be changed by bidder in any case and it may lead to cancellation of their offer.	
9.0	The quantity of items may vary during execution mainly due to actual requirement etc. The unit rates work out from the overall amount quoted & accepted by BHEL shall be considered and no separate unit rates shall be allowed. Unit rates shall be valid throughout the contract period.	
9.0	For payment of non schedule items, the rate shall be derived from Schedule of Rates 2014, PWD, Govt. of Bangladesh. While quoting for 4a&4b&4c, bidders shall specify requisite percentage either above or below BPWD rate schedule 2014 & strike out the other option which is not applicable. In case of quoting in both (above & below percentages for 4a,4b, 4c, above), the quoted percentage below the BPWD rate shall be considered, as the quoted rate.	
10.0	BIDDER'S QUOTED RATE/PRICE SHALL REMAIN FIRM FOR OFFER VALIDITY PERIOD	

ANNEXURE-VII				
BHARAT HEAVY ELECTRICALS LTD. POWER SECTOR EASTERN REGION KOLKATA				
PRICE SCHEDULE (PRICED)-REV-01				
VOLUME-III				
SCHEDULE- 2 :: CONCRETE				
PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.				
TENDER DOCUMENT NO - PSER-PUR:PMX:350:044(ENQ:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH:2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
A	CONCRETE WORKS			
	Supply of Concrete including cost of labour, materials (unless otherwise specified in BOQ/contract specification) and equipment for handling, transportation, batching, mixing with mechanised equipments like batching plant, complete as per specifications, relevant laws of Bangladesh, manufacturer's recommendation, relevant BS standards / equivalent international standards and as approved by BIFPCL/BHEL and as per direction of engineer in charge for the following. (transportation will be done by the user) [Payment terms: 60% of rate of respective items shall be released on receipt of stone aggregates & Cement at site duly certified by BHEL Engineer after Quality Checked certificate]			
1a	Supply of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birk chips conforming to ASTM C33 including breaking chips and screening) with normal workability for Pain Cement Concrete. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150]	CUM	200	0.00034048
1b	Supply of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birk chips conforming to ASTM C33 including breaking chips and screening) with normal workability for Pain Cement Concrete. [The cement shall be conforming to ASTM C150-07 with C3A content 5% to 8 % as specified in type- I]	CUM	2800	0.00449695
2a	Supply of Concrete of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with 40 mm graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200) with normal workability for Pain Cement Concrete. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150]	CUM	100	0.00018812
2b	Supply of Concrete of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with 40 mm graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200) with normal workability for Pain Cement Concrete. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	800	0.00141980
3a	Supply of grade C12/15 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birk chips conforming to ASTM C33 including breaking chips and screening) with normal workability for Pain Cement Concrete. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150]	CUM	200	0.00039437
3b	Supply of grade C12/15 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birk chips conforming to ASTM C33 including breaking chips and screening) with normal workability for Pain Cement Concrete. [The cement shall be conforming to ASTM C150-07 with C3A content 5% to 8 % as specified in type- I]	CUM	6800	0.01264946

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SCHEDULE- 2 :: CONCRETE				
PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.				
TENDER DOCUMENT NO - PSER-PUR:PMX-350:044(ENO:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH-2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
4a	Supply of Concrete of grade C12/15 as per BS EN-206 and BS 8500 or equivalent international standard (with 40 mm graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200) with normal workability for Plain Cement Concrete. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150]	CUM	500	0.00105707
4b	Supply of Concrete of grade C12/15 as per BS EN-206 and BS 8500 or equivalent international standard (with 40 mm graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200) with normal workability for Plain Cement Concrete. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	9500	0.01894756
5a	Supply of Concrete of grade C16/20 as per BS EN-206 and BS 8500 or equivalent international standard with 20 mm nominal size graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 with normal workability for Plain Cement Concrete. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150]	CUM	200	0.00043787
5b	Supply of Concrete of grade C16/20 as per BS EN-206 and BS 8500 or equivalent international standard with 20 mm nominal size graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 with normal workability for Plain Cement Concrete. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	5800	0.01197940

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SCHEDULE- 2 :: CONCRETE				
PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.				
TENDER DOCUMENT NO - PSEB-PUR:PMX-350:044(ENO:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH-2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
6a	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent international standard for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 including use of plasticizer/ superplasticizer conforming to BS EN 934 (latest) or equivalent international standard to achieve required slump in concrete for pumping. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16.]			
(i)	Grade C20/25	CUM	500	0.00121186
(ii)	Grade C25/30	CUM	2000	0.00498755
(iii)	Grade C30/37	CUM	2000	0.00512765
6b	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent international standard for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 including use of plasticizer/ superplasticizer conforming to BS EN 934 (latest) or equivalent international standard to achieve required slump in concrete for pumping. [The cement shall comply with Portland Pozzolana Cement as per BS EN 197-1 Part-4 with minimum ash content is more than 25%]			
(i)	Grade C20/25	CUM	500	0.00110897
(ii)	Grade C25/30	CUM	1250	0.00285255
(iii)	Grade C30/37	CUM	1250	0.00293268
6c	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent international standard for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 including use of plasticizer/ superplasticizer conforming to BS EN 934 (latest) or equivalent international standard to achieve required slump in concrete for pumping. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]			
(i)	Grade C20/25	CUM	18000	0.04115765
(ii)	Grade C25/30	CUM	27750	0.06528513
(iii)	Grade C30/37	CUM	132000	0.31926860

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TENDER DOCUMENT NO - PSEB-PUR:PMX-350:044(ENO:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH-2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
7a	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent International code for reinforced concrete works of grade C30/37 Grade in machine foundations with addition of suitable plasticizer conforming to BS 934 or equivalent International standard to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16.]	CUM	1000	0.00263020
7b	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent International code for reinforced concrete works of grade C30/37 Grade in machine foundations with addition of suitable plasticizer conforming to BS 934 or equivalent International standard to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200. [The cement shall be conforming to ASTM C150-07 with C3A content 5% to 8 % as specified in type- I]	CUM	9000	0.02233185
8a	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent International code for reinforced concrete works of grade C35/45 Grade in machine foundations with addition of suitable plasticizer conforming to BS 934 or equivalent International standard to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	4500	0.01161256
9	Extra over SL. No. A.6 to A.8 for controlling of temperature of fresh concrete to less than 25 degree centigrade using ice or by chiller plant, 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	20000	0.00458628
10a	Supply of concrete conforming to relevant BS code or equivalent international code with coarse sand and graded hard stone aggregate 12.5mm / 6 mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 etc complete as per following. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]			
(i)	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume)	CUM	2500	0.00498620
(ii)	1:1.5:3 (1 part cement, 1.5 part sand, 3 parts of aggregate by volume)	CUM	200	0.00041780
11a	Supply of Design Mix cement concrete as per BS 8500 and BS EN 206 or equivalent International code for reinforced concrete works using graded aggregate for Concrete in water retaining / conveying structures including addition of suitable plasticizer cum waterproofing cement additives conforming to BS 934 or equivalent international standard to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per relevant BS code or equivalent international code and specification with 20 mm nominal size graded aggregate for following grades. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]			
(i)	C 25/30 grade	CUM	50	0.00016197
(ii)	C 30/37 grade	CUM	500	0.00168444

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SCHEDULE- 2 :: CONCRETE				
PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.				
TENDER DOCUMENT NO - PSEER-PUR:PMX-350:044(ENO:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH-2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
11b	Supply of Design Mix cement concrete as per BS 8500 and BS EN 206 or equivalent International code for reinforced concrete works using graded aggregate for Concrete in water retaining / conveying structures including addition of suitable plasticizer cum waterproofing cement additives conforming to BS 934 or equivalent international standard to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per relevant BS code or equivalent international code and specification with 20 mm nominal size graded aggregate for following grades. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]			
(i)	C 25/30 grade	CUM	150	0.00045839
(ii)	C 30/37 grade	CUM	19500	0.06197474
12	Extra over items A 6 to A 11 for providing and mixing approved quality of Inorganic (Nitrite, Phosphate based) / Organic formulation (Amine based) based Corrosion inhibiting admixture in concrete as per detail specification of manufacturer (BASF / EUCLID /SIKA / FOSROC / SHALPLAST) etc. all complete, and Approval of formulation or type is based on the actual application at site & the description of Civil quality Engineer Incharge at site by BIFPCL/BHEL..	Kg	75000	0.00466718
13a	Supplying of concrete of grade C40/50 for pre-cast concrete as per BS EN-206 and BS 8500 or equivalent international standard with 20 mm nominal size stone aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]	CUM	100	0.00026434
13b	Supplying of concrete of grade C40/50 for pre-cast concrete as per BS EN-206 and BS 8500 or equivalent international standard with 20 mm nominal size stone aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	300	0.00074813
14a	Supplying dry lean concrete of required thickness of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birch chips conforming to ASTM C33) including breaking chips and screening all complete for Road Work. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]	CUM	500	0.00099952
14b	Supplying dry lean concrete of required thickness of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birch chips conforming to ASTM C33) including breaking chips and screening all complete for Road Work. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	8000	0.01508707
15a	Supplying cement concrete of grade C25/30 conforming to BS EN-206 and BS 8500 or equivalent international standard with coarse sand and graded hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 with approved admixture (if required), all complete for Road Work. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]	CUM	1000	0.00247516
15b	Supplying cement concrete of grade C25/30 conforming to BS EN-206 and BS 8500 or equivalent international standard with coarse sand and graded hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 with approved admixture (if required), all complete for Road Work. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	15000	0.03502589

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PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.				
TENDER DOCUMENT NO - PSER-PUR:PMX-350:044(ENO:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH-2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
16a	Supply of cement concrete grade C30/37 confirming to BS EN 206:2013 with a minimum cement content of 400 Kg per cum of concrete including all materials, hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200, plasticizer wherever required all complete for casting of Cast-in situ Piles. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]	CUM	5000	0.01307550
16b	Supply of cement concrete grade C30/37 confirming to BS EN 206:2013 with a minimum cement content of 400 Kg per cum of concrete including all materials, hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200, plasticizer wherever required all complete for casting of Cast-in situ Piles. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	83615	0.20628450
17a	Supply of cement concrete as per BS EN 12794 2005 using cement concrete grade C40/50 confirming to BS EN 206:2013 with a minimum cement content of 400 Kg per cum of concrete including all materials, hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200, plasticizer wherever required all complete for casting of Pre-cast Piles. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]	CUM	1000	0.00266638
17b	Supply of cement concrete as per BS EN 12794 2005 using cement concrete grade C40/50 confirming to BS EN 206:2013 with a minimum cement content of 400 Kg per cum of concrete including all materials, hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200, plasticizer wherever required all complete for casting of Pre-cast Piles. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	44000	0.11067976
18	Transportation of Concrete to the work spot by providing transit mixer of standard capacity, operator, fuel, including incidental all complete within plant area for the following leads.			
(i)	Up to and including lead of 2 KM	CUM	2000	0.00035222
(ii)	exceeding 2 KM up to and including 3 KM	CUM	2000	0.00045788
(iii)	exceeding 3 KM up to and including 4 KM	CUM	2000	0.00052832
	TOTAL WEIGHTAGE			1.00000000

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<u>BHARAT HEAVY ELECTRICALS LTD.</u>				
<u>POWER SECTOR EASTERN REGION</u>				
<u>KOLKATA</u>				
<u>PRICE SCHEDULE (PRICED)-REV-01</u>				
VOLUME-III				
SCHEDULE- 3 :: CIVIL LABORATORY				
PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGHERHAT DISTRICT, BANGLADESH.				
TENDER DOCUMENT NO - PSER:PUR:PMX-350:044(ENQ:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH-3 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
B	LABORATORY			
1	Lumpsum price for Setting up & maintain a Central testing laboratory (one AC lab size 4.5 mtr. x 6 mtr. and 1 AC / non AC lab 9 mtr. x 4.5 mtr.), concrete, cement specimen curing tank etc. by the bidder at a suitable location near batching plant to carry out all relevant tests for 5 years from the date of start of operation. Detail of laboratory equipments as per Annexure - A of TCC with all consumables for laboratory & all relevant BS / BS EN / ASTM codes are to be arranged by the contractor within quoted rate. These equipments shall remain contractor's property and they will be allowed to take out the same after completion of contract period. Instruments used in Lab shall have valid calibration certificate from are calibrated by the authorized agency. Raised platform (600mm wide) with stone / tile finished up to 1.0m high dado above platform level to be provided. At least 2 Nos. Computer, printer, scanner, consumable priter curtige, paper, other office consumables etc. to be provided with required numbers of good quality table & chairs to be provided. Necessary electrical wiring for operation of various equipments and other use to be provided. Before start of construction of laboratory, the lay-out drawing shall be approved by BHEL engineer.	No.	1	0.22046882
2	Providing Chemist / Qualified quality engineer [minimum BSc. In relevant field with 3 years working experience and Must be conversion with BS / BS EN & ASTM Codes]	Man months	120	0.44544641
3	Providing experienced laboratory assistant / Laboratory Technician for round the clock operation as & when required	Man months	300	0.33408477
TOTAL WEIGHTAGE				1.00000000

ANNEXURE-VII

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR EASTERN REGION
KOLKATA

UNPRICED PRICE SCHEDULE -REV-01

VOLUME-III

PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.

TENDER DOCUMENT NO - PSER:PUR:PMX-350:044(ENQ:17:PP:0015:PUR:56) Date: 12/06/2017

PREAMBLE

1	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully before filling in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender and other tender sections as applicable and shall have precedence over any contrary statement mentioned any where in this document.
2	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. Drawings enclosed with the tender are only preliminary and for tender purposes and giving some idea of the work involved. The work is to be executed as per drawings & documents, which shall be furnished during execution.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4	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 (except service tax), 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 complete tender document and this schedule.
5	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains within fifteen percent ($\pm 15\%$) of the awarded price as per LOI.
6	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and / or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order.
7	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing, clearing of old structures 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. However, if separate rate for such item is available in the rate schedule, the same shall be considered.
8	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.
9	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.
10	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
11	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/ altered by them. Also putting any comments instead of rates/price in the designated column of the rate schedule shall make the offer liable for rejection.
12	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.
13	In case if the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of BPWD schedule as prescribed in the tender / BOQ cum Rate Schedule.
14	No interest, whatsoever, shall be payable by BHEL on the security deposit, any bank guarantee submitted or any amount due to successful bidder/contractor.
15	Size and weights of various items are mentioned in the attached BOQ cum rate / price schedule for reference purpose only & these shall not be taken into consideration for quoting / calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender.

<u>ANNEXURE-VII</u>
<u>BHARAT HEAVY ELECTRICALS LTD.</u> <u>POWER SECTOR EASTERN REGION</u> <u>KOLKATA</u>
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VOLUME-III
PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.
TENDER DOCUMENT NO - PSER:PMX-350:044(ENQ:17:PP:0015:PUR:56) Date: 12/06/2017
SCH-1 : TOTAL PRICE

SPACES TO BE FILLED WITH QUOTED/UNQUOTED ONLY

SL NO	DESCRIPTION	TOTAL QUOTED PRICE (IN USD) (IN FIGURES)
1.0	Total price for Schedule - 2 / Concrete	(IN FIGURES)
		(IN WORDS)
2.0	Total price for Schedule - 3 / Civil Laboratory	(IN FIGURES)
		(IN WORDS)
3.0	TOTAL AMOUNT	(IN FIGURES)
		(IN WORDS)
4.0	NON-SCHEDULE ITEM Quote % above or % below for items not covered as above of this schedule. The rate shall be derived from Schedule of Rates 2014, PWD, Govt. of Bangladesh	
4a)	Rate of complete item	_____ % above/ _____ % below of BPWD Rate Schedule 2014
4b)	Rate of supply of material at site only	_____ % above/ _____ % below of BPWD Rate Schedule 2014
4c)	Rate for execution complete excluding supply of materials.	_____ % above/ _____ % below of BPWD Rate Schedule 2014
NOTE		
1.0	Bidder shall quote total price of SCH-2 CONCRETE at SI no 1 & SCH-3 CIVIL LABORATORY at SI. No. 2 above. All other amounts/ rates of each item of works in respective schedules/ parts will be derived based on allocated percentages. As such, any uncalled figure/ amount noted at any other place / schedule of Volume-III will not be reckoned & will stand null & void.	
2.0	Bidder to note that total price at SI no 3 above shall be considered for evaluation & awarding. As such grand total price should be complete in all respect for the full scope defined and considering all terms and conditions.	
3.0	Bidder's quoted total price of SCH-1 at SI. no 1 & 2 above shall be apportioned into amount of various items of works based on allocated percentages against respective item of SCH-2 & 3. As such, bidder shall not indicate/ quote any amount / rate in these schedules / parts and any amount / rate quoted against any item shall not be taken into cognizance / account and offer may be liable for rejection.	
4.0	Based on the itemwise percentage allocations, the amount for the individual items of the Bill of Quantity shall be arrived at. The rates of individual items shall be derived from the amount against each items after rounding off .	
5.0	Unit rates of each item of works of respective schedules / parts will be derived by dividing derived amount by corresponding quantities. In deriving the unit rates of each item in this manner, figures only upto 2 decimal places will be taken into account. Any adjustment, if required, due to such methodology, will be effected in final bill.	
6.0	Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate.	
7.0	Any item as per scope of work, if not included in the price quoted above and shown separately will not be taken cognizance of and the offer shall be liable for rejection.	
8.0	Price format shall not be changed by bidder in any case and it may lead to cancellation of their offer.	
9.0	The quantity of items may vary during execution mainly due to actual requirement etc. The unit rates work out from the overall amount quoted & accepted by BHEL shall be considered and no separate unit rates shall be allowed. Unit rates shall be valid throughout the contract period.	
9.0	For payment of non schedule items, the rate shall be derived from Schedule of Rates 2014, PWD, Govt. of Bangladesh. While quoting for 4a&4b&4c, bidders shall specify requisite percentage either above or below BPWD rate schedule 2014 & strike out the other option which is not applicable. In case of quoting in both (above & below percentages for 4a,4b, 4c, above), the quoted percentage below the BPWD rate shall be considered, as the quoted rate	
10.0	BIDDER'S QUOTED RATE/PRICE SHALL REMAIN FIRM FOR OFFER VALIDITY PERIOD	

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BHARAT HEAVY ELECTRICALS LTD. POWER SECTOR EASTERN REGION KOLKATA				
UNPRICED PRICE SCHEDULE -REV-01				
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SCHEDULE- 2 :: CONCRETE				
PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.				
TENDER DOCUMENT NO - PSER-PUR:PMX:350:044(ENQ:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH:2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
A	CONCRETE WORKS			
	Supply of Concrete including cost of labour, materials (unless otherwise specified in BOQ/contract specification) and equipment for handling, transportation, batching, mixing with mechanised equipments like batching plant, complete as per specifications, relevant laws of Bangladesh, manufacturer's recommendation, relevant BS standards / equivalent international standards and as approved by BIFPCL/BHEL and as per direction of engineer in charge for the following. (transportation will be done by the user) [Payment terms: 60% of rate of respective items shall be released on receipt of stone aggregates & Cement at site duly certified by BHEL Engineer after Quality Checked certificate]			
1a	Supply of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birk chips conforming to ASTM C33 including breaking chips and screening) with normal workability for Pain Cement Concrete. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150]	CUM	200	0.00034048
1b	Supply of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birk chips conforming to ASTM C33 including breaking chips and screening) with normal workability for Pain Cement Concrete. [The cement shall be conforming to ASTM C150-07 with C3A content 5% to 8 % as specified in type- I]	CUM	2800	0.00449695
2a	Supply of Concrete of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with 40 mm graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200) with normal workability for Pain Cement Concrete. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150]	CUM	100	0.00018812
2b	Supply of Concrete of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with 40 mm graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200) with normal workability for Pain Cement Concrete. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	800	0.00141980
3a	Supply of grade C12/15 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birk chips conforming to ASTM C33 including breaking chips and screening) with normal workability for Pain Cement Concrete. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150]	CUM	200	0.00039437
3b	Supply of grade C12/15 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birk chips conforming to ASTM C33 including breaking chips and screening) with normal workability for Pain Cement Concrete. [The cement shall be conforming to ASTM C150-07 with C3A content 5% to 8 % as specified in type- I]	CUM	6800	0.01264946

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TENDER DOCUMENT NO - PSER-PUR:PMX-350:044(ENO:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH-2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
4a	Supply of Concrete of grade C12/15 as per BS EN-206 and BS 8500 or equivalent international standard (with 40 mm graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200) with normal workability for Plain Cement Concrete. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150]	CUM	500	0.00105707
4b	Supply of Concrete of grade C12/15 as per BS EN-206 and BS 8500 or equivalent international standard (with 40 mm graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200) with normal workability for Plain Cement Concrete. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	9500	0.01894756
5a	Supply of Concrete of grade C16/20 as per BS EN-206 and BS 8500 or equivalent international standard with 20 mm nominal size graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 with normal workability for Plain Cement Concrete. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150]	CUM	200	0.00043787
5b	Supply of Concrete of grade C16/20 as per BS EN-206 and BS 8500 or equivalent international standard with 20 mm nominal size graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 with normal workability for Plain Cement Concrete. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	5800	0.01197940

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SCH-2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
6a	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent international standard for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 including use of plasticizer/ superplasticizer conforming to BS EN 934 (latest) or equivalent international standard to achieve required slump in concrete for pumping. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16.]			
(i)	Grade C20/25	CUM	500	0.00121186
(ii)	Grade C25/30	CUM	2000	0.00498755
(iii)	Grade C30/37	CUM	2000	0.00512765
6b	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent international standard for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 including use of plasticizer/ superplasticizer conforming to BS EN 934 (latest) or equivalent international standard to achieve required slump in concrete for pumping. [The cement shall comply with Portland Pozzolana Cement as per BS EN 197-1 Part-4 with minimum ash content is more than 25%]			
(i)	Grade C20/25	CUM	500	0.00110897
(ii)	Grade C25/30	CUM	1250	0.00285255
(iii)	Grade C30/37	CUM	1250	0.00293268
6c	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent international standard for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 including use of plasticizer/ superplasticizer conforming to BS EN 934 (latest) or equivalent international standard to achieve required slump in concrete for pumping. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]			
(i)	Grade C20/25	CUM	18000	0.04115765
(ii)	Grade C25/30	CUM	27750	0.06528513
(iii)	Grade C30/37	CUM	132000	0.31926860

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SCH-2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
7a	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent International code for reinforced concrete works of grade C30/37 Grade in machine foundations with addition of suitable plasticizer conforming to BS 934 or equivalent International standard to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16.]	CUM	1000	0.00263020
7b	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent International code for reinforced concrete works of grade C30/37 Grade in machine foundations with addition of suitable plasticizer conforming to BS 934 or equivalent International standard to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200. [The cement shall be conforming to ASTM C150-07 with C3A content 5% to 8 % as specified in type- I]	CUM	9000	0.02233185
8a	Supply of Design Mix cement concrete conforming to BS EN-206 and BS 8500 or equivalent International code for reinforced concrete works of grade C35/45 Grade in machine foundations with addition of suitable plasticizer conforming to BS 934 or equivalent International standard to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	4500	0.01161256
9	Extra over SL. No. A.6 to A.8 for controlling of temperature of fresh concrete to less than 25 degree centigrade using ice or by chiller plant, 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	20000	0.00458628
10a	Supply of concrete conforming to relevant BS code or equivalent international code with coarse sand and graded hard stone aggregate 12.5mm / 6 mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 etc complete as per following. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]			
(i)	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume)	CUM	2500	0.00498620
(ii)	1:1.5:3 (1 part cement, 1.5 part sand, 3 parts of aggregate by volume)	CUM	200	0.00041780
11a	Supply of Design Mix cement concrete as per BS 8500 and BS EN 206 or equivalent International code for reinforced concrete works using graded aggregate for Concrete in water retaining / conveying structures including addition of suitable plasticizer cum waterproofing cement additives conforming to BS 934 or equivalent international standard to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per relevant BS code or equivalent international code and specification with 20 mm nominal size graded aggregate for following grades. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]			
(i)	C 25/30 grade	CUM	50	0.00016197
(ii)	C 30/37 grade	CUM	500	0.00168444

VOLUME-III				
SCHEDULE- 2 :: CONCRETE				
PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.				
TENDER DOCUMENT NO - PSEER-PUR:PMX-350:044(ENO:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH-2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
11b	Supply of Design Mix cement concrete as per BS 8500 and BS EN 206 or equivalent International code for reinforced concrete works using graded aggregate for Concrete in water retaining / conveying structures including addition of suitable plasticizer cum waterproofing cement additives conforming to BS 934 or equivalent international standard to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per relevant BS code or equivalent international code and specification with 20 mm nominal size graded aggregate for following grades. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]			
(i)	C 25/30 grade	CUM	150	0.00045839
(ii)	C 30/37 grade	CUM	19500	0.06197474
12	Extra over items A 6 to A 11 for providing and mixing approved quality of Inorganic (Nitrite, Phosphate based) / Organic formulation (Amine based) based Corrosion inhibiting admixture in concrete as per detail specification of manufacturer (BASF / EUCLID /SIKA / FOSROC / SHALPLAST) etc. all complete, and Approval of formulation or type is based on the actual application at site & the description of Civil quality Engineer Incharge at site by BIFPCL/BHEL..	Kg	75000	0.00466718
13a	Supplying of concrete of grade C40/50 for pre-cast concrete as per BS EN-206 and BS 8500 or equivalent international standard with 20 mm nominal size stone aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]	CUM	100	0.00026434
13b	Supplying of concrete of grade C40/50 for pre-cast concrete as per BS EN-206 and BS 8500 or equivalent international standard with 20 mm nominal size stone aggregate shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	300	0.00074813
14a	Supplying dry lean concrete of required thickness of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birch chips conforming to ASTM C33) including breaking chips and screening all complete for Road Work. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]	CUM	500	0.00099952
14b	Supplying dry lean concrete of required thickness of grade C8/10 as per BS EN-206 and BS 8500 or equivalent international standard (with well graded picked jhama birch chips conforming to ASTM C33) including breaking chips and screening all complete for Road Work. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	8000	0.01508707
15a	Supplying cement concrete of grade C25/30 conforming to BS EN-206 and BS 8500 or equivalent international standard with coarse sand and graded hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 with approved admixture (if required), all complete for Road Work. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]	CUM	1000	0.00247516
15b	Supplying cement concrete of grade C25/30 conforming to BS EN-206 and BS 8500 or equivalent international standard with coarse sand and graded hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200 with approved admixture (if required), all complete for Road Work. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	15000	0.03502589

VOLUME-III				
SCHEDULE- 2 :: CONCRETE				
PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.				
TENDER DOCUMENT NO - PSER-PUR:PMX-350:044(ENO:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH-2 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
16a	Supply of cement concrete grade C30/37 confirming to BS EN 206:2013 with a minimum cement content of 400 Kg per cum of concrete including all materials, hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200, plasticizer wherever required all complete for casting of Cast-in situ Piles. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]	CUM	5000	0.01307550
16b	Supply of cement concrete grade C30/37 confirming to BS EN 206:2013 with a minimum cement content of 400 Kg per cum of concrete including all materials, hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200, plasticizer wherever required all complete for casting of Cast-in situ Piles. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	83615	0.20628450
17a	Supply of cement concrete as per BS EN 12794 2005 using cement concrete grade C40/50 confirming to BS EN 206:2013 with a minimum cement content of 400 Kg per cum of concrete including all materials, hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200, plasticizer wherever required all complete for casting of Pre-cast Piles. [The cement shall be sulphate resisting type (cement type V) as per ASTM C150-16]	CUM	1000	0.00266638
17b	Supply of cement concrete as per BS EN 12794 2005 using cement concrete grade C40/50 confirming to BS EN 206:2013 with a minimum cement content of 400 Kg per cum of concrete including all materials, hard stone aggregate of 20mm nominal size shall comply with and be tested in accordance with the requirements of BS 812, BS 882, BS 1199 and BS 1200, plasticizer wherever required all complete for casting of Pre-cast Piles. [The cement shall be conforming to ASTM C150-16 with C3A content 5% to 8 % as specified in type- I]	CUM	44000	0.11067976
18	Transportation of Concrete to the work spot by providing transit mixer of standard capacity, operator, fuel, including incidental all complete within plant area for the following leads.			
(i)	Up to and including lead of 2 KM	CUM	2000	0.00035222
(ii)	exceeding 2 KM up to and including 3 KM	CUM	2000	0.00045788
(iii)	exceeding 3 KM up to and including 4 KM	CUM	2000	0.00052832
	TOTAL WEIGHTAGE			1.00000000

<u>ANNEXURE-VII</u>				
<u>BHARAT HEAVY ELECTRICALS LTD.</u>				
<u>POWER SECTOR EASTERN REGION</u>				
<u>KOLKATA</u>				
<u>UNPRICED PRICE SCHEDULE -REV-01</u>				
VOLUME-III				
SCHEDULE- 3 :: CIVIL LABORATORY				
PROVIDING READY MIX CONCRETE FOR 2X660 MW MAITREE SUPER THERMAL POWER PROJECT AT MOIDARA VILLAGE, RAMPAL UPAZILA, BAGERHAT DISTRICT, BANGLADESH.				
TENDER DOCUMENT NO - PSER:PUR:PMX-350:044(ENQ:17:PP:0015:PUR:56) Date: 12/06/2017				
SCH-3 : TOTAL PRICE BREAK UP				
SL. NO	DESCRIPTION OF ITEM	UNIT	Quantity	WEIGHTAGE FOR AMOUNT OF EACH ITEM(Nearest to the 8 decimal points) W.R.T THE TOTAL OF VENDOR QUOTED PRICE IN SCH-1
B	LABORATORY			
1	Lumpsum price for Setting up & maintain a Central testing laboratory (one AC lab size 4.5 mtr. x 6 mtr. and 1 AC / non AC lab 9 mtr. x 4.5 mtr.), concrete, cement specimen curing tank etc. by the bidder at a suitable location near batching plant to carry out all relevant tests for 5 years from the date of start of operation. Detail of laboratory equipments as per Annexure - A of TCC with all consumables for laboratory & all relevant BS / BS EN / ASTM codes are to be arranged by the contractor within quoted rate. These equipments shall remain contractor's property and they will be allowed to take out the same after completion of contract period. Instruments used in Lab shall have valid calibration certificate from are calibrated by the authorized agency. Raised platform (600mm wide) with stone / tile finished up to 1.0m high dado above platform level to be provided. At least 2 Nos. Computer, printer, scanner, consumable priter curtige, paper, other office consumables etc. to be provided with required numbers of good quality table & chairs to be provided. Necessary electrical wiring for operation of various equipments and other use to be provided. Before start of construction of laboratory, the lay-out drawing shall be approved by BHEL engineer.	No.	1	0.22046882
2	Providing Chemist / Qualified quality engineer [minimum BSc. In relevant field with 3 years working experience and Must be conversion with BS / BS EN & ASTM Codes]	Man months	120	0.44544641
3	Providing experienced laboratory assistant / Laboratory Technician for round the clock operation as & when required	Man months	300	0.33408477
TOTAL WEIGHTAGE				1.00000000