

# TENDER SPECIFICATION

**NO: BHE/PW/PUR/PDVT-ENB/749**

CONSTRUCTION AND DEVELOPING OF OPEN STORAGE YARD, ROADS, HARD SURFACING, FENCING, DRAINAGE AND BUNK HOUSE OFFICE COMPLEX AREA INCLUDING INTERNAL / EXTERNAL ELECTRIFICATION OF OPEN STORAGE YARD AREAS AND BUNK HOUSE OFFICE COMPLEX AREA AND RAISED CONCRETE PLATFORM ETC.

AT  
2X250 MW  
BHAVNAGAR ENERGY COMPANY LIMITED (BECL)  
DISTT. - BHAVNAGAR  
GUJRAT.

## TECHNICAL BID - VOLUME- I

TENDER SPECIFICATIONS CONSISTS OF:

- Notice Inviting Tender,
- Technical Conditions of Contract,
- Special conditions of Contract,
- General conditions of Contract
- Forms & Procedures

VOLUME I



**Bharat Heavy Electricals Limited**  
(A Government of India Undertaking)  
Power Sector - Western Region  
345-Kingsway, Nagpur-440001

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LEGEND:

This document ( i.e. NIT & Vol-I A ) is hosted in BHEL web page ([www.bhel.com](http://www.bhel.com)) as a ( Vol- I ) of Technical Bid

§: “**Vol I -B, I-C, I-D**” of **Part-I ( Vol- I )** Hosted in BHEL web page ([www.bhel.com](http://www.bhel.com)) separately as a part of Technical Bid.

@: **Price bid is** issued as a separate hard copy booklet ‘Tender Specifications – Volume-II (Price Bid-749)’. Hosted in BHEL web page ([www.bhel.com](http://www.bhel.com)) separately as titled “**PRICE BID-749** ”

## **Tender Specification Issue Details**

**Tender Specification No: BHE/PW/PUR/PDVT-749**

**CONSTRUCTION AND DEVELOPING OF OPEN STORAGE YARD, ROADS, HARD SURFACING, FENCING, DRAINAGE AND BUNK HOUSE OFFICE COMPLEX AREA INCLUDING INTERNAL / EXTERNAL ELECTRIFICATION OF OPEN STORAGE YARD AREAS AND BUNK HOUSE OFFICE COMPLEX AREA AND RAISED CONCRETE PLATFORM ETC.**

**AT  
2X250 MW  
BHAVNAGAR ENERGY COMPANY LIMITED (BECL)  
DISTT. - BHAVNAGAR  
GUJRAT.**

EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR                      Refer Notice Inviting Tender  
TENDER SUBMISSION                      .

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING VOLUME-I AND VOLUME- II ARE ISSUED TO:

M/s. ....

.....

PLEASE NOTE:  
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

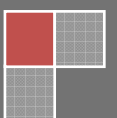
For Bharat Heavy Electricals Limited

DY. GENERAL MANAGER (Purchase)  
Place: Nagpur  
Date :

Rev 00  
6<sup>th</sup> July  
2010

# NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



**NOTICE INVITING TENDER (NIT)**  
**NOTE: BIDDER MAY DOWNLOAD FROM WEB SITES**  
**OR**  
**PURCHASE TENDERS FROM THIS OFFICE ALSO**

=====

To

Dear Sir/Madam

**Sub : NOTICE INVITING TENDER**

Sealed offers in two part bid system are invited from reputed & experienced bidders (meeting [PRE QUALIFICATION CRITERIA](#) as mentioned in Annexure-I) for the subject job by the undersigned on the behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender document. Following points relevant to the tender may please be noted and complied with.

**1.0 Salient Features of NIT**

SL NO	ISSUE	DESCRIPTION
i	<b>TENDER NUMBER</b>	<b>BHE/PW/PUR/PDVT-ENB/749</b>
ii	<b>Broad Scope of job</b>	CONSTRUCTION AND DEVELOPING OF OPEN STORAGE YARD, ROADS,HARD SURFACING, FENCING, DRAINAGE AND BUNK HOUSE OFFICE COMPLEX AREA INCLUDING INTERNAL / EXTERNAL ELECTRIFICATION OF OPEN STORAGE YARD AREAS AND BUNK HOUSE OFFICE COMPLEX AREA AND RAISED CONCRETE PLATFORM ETC.AT 2X250 MW BHAVNAGAR ENERGY COMPANY LIMITED (BECL),DISTT. – BHAVNAGAR,GUJRAT.
iii	<b>DETAILS OF TENDER DOCUMENT</b>	
a	Volume-IA	<i>Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc</i> <span style="float: right;"><i>Applicable</i></span>
b	Volume-IB	<i>Special Conditions of Contract (SCC)</i> <span style="float: right;"><i>Applicable</i></span>
c	Volume-IC	<i>General Conditions of Contract (GCC)</i> <span style="float: right;"><i>Applicable</i></span>
d	Volume-ID	<i>Forms and Procedures</i> <span style="float: right;"><i>Applicable</i></span>
e	Volume-II	<i>Price Schedule (Absolute value).</i> <span style="float: right;"><i>Applicable</i></span>
iv	<b>Issue of Tender Documents</b>	<b>1. Sale from BHEL PS Regional office at :</b> <b>Start : 28 /07/ 2010</b> <b>Closes: 16/08/2010 , Time :17.00 Hrs</b> <b>2. From BHEL website (<a href="http://www.bhel.com">www.bhel.com</a>)</b> Tender documents can however be downloaded from website till due date of submission <span style="float: right;"><i>Applicable</i></span>

**BHEL PSWR**  
**Notice Inviting Tender**

**Tender Specification No : BHE/PW/PUR/PDVT-ENB/749**

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v	<b>DUE DATE &amp; TIME OF OFFER SUBMISSION</b>	<b>Date : 17 /08/ 2010 , Time :15.00Hrs</b> <b>Place :</b>	<i>Applicable</i>
vi	<b>OPENING OF TENDER</b>	<b>1 hours after the latest due date and time of Offer submission</b> <i>Notes:</i> (1) In case the due date of opening of tender becomes a non-working day, tenders shall be opened on next working day at the same time. (2) Bidder may depute representative to witness the opening of tender	<i>Applicable</i>
vii	<b>EMD AMOUNT</b>	<b>Rs 2,00,000/- (Rupees Two Lakhs Only)</b>	<i>Applicable</i>
viii	<b>COST OF TENDER</b>	Rs 2000/-.	<i>Applicable</i>
ix	<b>LAST DATE FOR SEEKING CLARIFICATION</b>	<b>Date: (Atleast 5 days before the due date of offer submission)</b> Along with soft version also, addressing to undersigned & to others as per contact address given below	<i>Applicable</i>
x	<b>SCHEDULE OF Pre Bid Discussion (PBD)</b>	Date : Not applicable.	<i>Not applicable.</i>
xi	<b>INTEGRITY PACT &amp; DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)</b>	Not Applicable	<i>Not Applicable</i>
xii	<b>Latest updates</b>	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage ( <a href="http://www.bhel.com">www.bhel.com</a> -->Tender Notifications →View Corrigendums) <b>and not in the newspapers</b> . Bidders to keep themselves updated with all such information	

- 2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly signed & stamped on each page, as part of offer. **Rates/Price including discounts/rebates, if any, mentioned anywhere/in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.**
- 3.0 Unless specifically stated otherwise, bidder shall remit cost of tender and courier charges if applicable, in the form of Demand Draft drawn in favour of Bharat Heavy Electricals Ltd, payable at Power Sector Regional HQ at Nagpur issuing the Tender, along with techno-commercial offer. Bidder may also choose to deposit the Tender document cost by cash at the Cash Office as stated above against sl no iv of 1, on any working day; and in such case copy of Cash receipt is to be enclosed with the Techno Commercial offer. Sale of tender Documents shall not take place on National Holidays, holidays declared by Central or State Governments and BHEL PS HQ at Nagpur, Sundays and second/ last Saturdays
- 4.0 Unless specifically stated otherwise, bidder shall deposit EMD through Demand Draft/Pay Order in favour of Bharat Heavy Electricals Ltd, payable at Nagpur. For other details and for 'One Time EMD' please refer General Conditions of Contract.

- 5.0 **Procedure for Submission of Tenders:** The Tenderers must submit their Tenders to Officer inviting Tender, as detailed below:
- PART-I consisting of 'PART-I A (Techno Commercial Bid)' & 'PART-I B (EMD/COST of TENDER)' in two separate sealed and superscribed envelopes (ENVELOPE-I & ENVELOPE-II)
  - PART-II (Price Bid) – in sealed and superscribed envelope (ENVELOPE-III)

6.0 The contents for ENVELOPES and the superscription for each sealed cover/Envelope are as given below.  
**(All pages to be signed and stamped)**

Sl no	Description	Remarks
	<b>Part-I A</b>	
	<b>ENVELOPE – I superscribed as :</b> PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:  <b>CONTAINING THE FOLLOWING:-</b>	
i.	Covering letter/Offer forwarding letter of Tenderer.	
ii.	Duly filled-in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above.  <b>Note:</b> a. In case of any deviation, the same should be submitted separately for technical & commercial parts, indicating respective clauses of tender against which deviation is taken by bidder. The list of such deviation shall be placed after document under sl no (i) above. It shall be specifically noted that deviation recorded elsewhere shall not be entertained. b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding. i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL ii). In case of unacceptable deviations, BHEL reserves the right to reject the tender	
iii.	Supporting documents/ annexure/ schedules/ drawing etc as required in line with Pre-Qualification criteria.  It shall be specifically noted that all documents as per above shall be indexed properly and credential certificates issued by clients shall distinctly bear the name of organization, contact ph no, FAX no, etc.	
iv.	All Amendments/Correspondences/Corrigenda/Clarifications/Changes/ Errata etc pertinent to this NIT.	
v.	Integrity Pact Agreement (Duly signed by the authorized signatory)	If applicable
vi.	Duly filled-in annexures, formats etc as required under this Tender Specification/NIT	
vii.	Notice inviting Tender (NIT)	
viii.	Volume – I A : <u>Technical</u> Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc	
ix.	Volume – I B : Special Conditions of Contract (SCC)	
x.	Volume – I C : General Conditions of Contract (GCC)	
xi.	Volume – I D : Forms & Procedures	

xii.	Volume – II (UNPRICED – without disclosing rates/price, but mentioning only 'QUOTED' or 'UNQUOTED' against each item	
xiii.	Any other details preferred by bidder with proper indexing.	

<b>PART-I B</b>		
	<p><b><u>ENVELOPE – II superscribed as:</u></b> PART-I (EMD/COST of TENDER) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:</p> <p><b>CONTAINING THE FOLLOWING:-</b></p>	
i.	<p>1. Earnest Money Deposit (EMD) in the form as indicated in this Tender <b>OR</b> Documentary evidence for 'One Time EMD' with the Power Sector Region of BHEL floating the Tender</p> <p>2. Cost of Tender ( Demand Draft or copy of Cash Receipt as the case may be)</p>	

<b>PART-II</b>		
	<b>PRICE BID</b> consisting of the following shall be enclosed	
	<p><b><u>ENVELOPE-III</u></b> superscribed as: PART-II (PRICE BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:</p> <p><b>CONTAINING THE FOLLOWING</b></p>	
i	Covering letter/Offer forwarding letter of Tenderer enclosed in Part-I	
ii	Volume II – PRICE BID ( Duly Filled in Schedule of Rates – rate/price to be entered in words as well as figures)	

<b>OUTER COVER</b>		
	<p><b><u>ENVELOPE-IV</u></b> (MAIN ENVELOPE / OUTER ENVELOPE) superscribed as: TECHNO-COMMERCIAL BID, PRICE BID &amp; EMD TENDER NO: NAME OF WORK: PROJECT: DUE DATE OF SUBMISSION:</p> <p><b>CONTAINING THE FOLLOWING:</b></p>	
i	<ul style="list-style-type: none"> <li>○ Envelopes I</li> <li>○ Envelopes II</li> <li>○ Envelopes III</li> </ul>	

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

- 7.0 No Deviation with respect to tender clauses and no additional clauses/ suggestions/ in Techno-commercial bid/ Price bid shall normally be considered by BHEL. Bidders are requested to positively comply with the same.
- 8.0 BHEL reserves the right to accept or reject any or all Offers without assigning any reasons thereof. BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).

**9.0 Assessment of Capacity of Bidders: ( Shall be applicable for bid evaluation from 1<sup>st</sup> Jan- 2011 onwards )**

**Bidders capacity for executing the job under tender shall be assessed as per the following:**

- I. **Assigning Weightages (A) for Similar Jobs Under-Execution:** Weightages shall be worked out and assigned based on the average number of Similar Works under execution including works yet to be commenced by the agency, in the following manner:
- i). Number of Similar Jobs
- a) No. of jobs in BHEL, PSER : Say 'J'
  - b) No. of jobs in BHEL, PSSR : Say 'K'
  - c) No. of jobs in BHEL, PSWR : Say 'L'
  - d) No. of jobs in BHEL, PSNR : Say 'M'
  - e) No. of jobs with other customers\* : Say 'N' (\*: Other than BHEL PSER, PSSR, PSWR & PSNR)
  - f) Average No. of Jobs is 'P' = (J+K+L+M+N) divided by 5
- ii) Weightage "A" assigned to bidders based on Average Number of jobs "P":
- a) If 'P' = 0-1, "A" will be equal to '3'
  - b) If 'P' = 2-3, "A" will be equal to '2'
  - c) If 'P' = 4-5, "A" will be equal to '1'
  - d) If 'P' is Above 5, "A" will be equal to '0'
- II. **Weightage "B" for Quarterly Performance Reports of Vendors:** This shall be based on the averages of the net weighted score obtained by the bidder for the jobs under execution (excluding works not commenced) for the quarter previous to the last quarter reckoned from the date of latest due date of submission, in all four Regions i.e BHEL PSER, PSSR, PSWR & PSNR, in the following manner.
- i). Ratings by Power Sector Region:
- a) PS ER's Rating 'Rer' =  $(X_1 + X_2 + \dots + X_n)$  divided by n
  - b) PS WR's Rating 'Rwr' =  $(X_1 + X_2 + \dots + X_n)$  divided by n
  - c) PS SR's Rating 'Rsr' =  $(X_1 + X_2 + \dots + X_n)$  divided by n
  - d) PS NR's Rating 'Rnr' =  $(X_1 + X_2 + \dots + X_n)$  divided by n
  - e) **Over all Power Sector Region Rating 'R<sub>BHEL</sub>' = (Rer+ Rwr+ Rsr+ Rnr) divided by 4**
- (where "X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>,...X<sub>n</sub>" is the net weighted score obtained by the bidder as per the "Evaluation of Contractor Performance (Quarterly)" against the various contracts 'n' under execution in the respective Region).
- ii) Weightage "B" assigned to bidders based on Overall Power Sector Rating (R<sub>BHEL</sub>):

- 
- a) If  $R_{BHEL}$  is 80% and above, "B" will be equal to '6'
  - b) If  $R_{BHEL}$  is  $> 70\% < 80\%$ , "B" will be equal to '5'
  - c) If  $R_{BHEL}$  is  $> 60\% < 70\%$ , "B" will be equal to '4'
  - d) If  $R_{BHEL}$  is  $= < 60\%$ , "B" will be equal to '0'

III. **Evaluation of Bidders capacity to execute the job under tender:** shall be based on the sum of scores obtained in 'A' and 'B', as below:

- a) **6 or above : Considered 'Qualified' for the job under tender**
- b) **Less than 6: Considered 'NOT Qualified' for the job under tender**

IV. **Explanatory note:**

- a) Similar work means Boiler or Turbine or Civil or Electrical or CI, etc irrespective of rating of Plant
- b) Quarter shall be as per the quarter defined in the "Evaluation of Contractor performance (Quarterly)". For contracts where annexed Quarterly Evaluation performance was not part of the contract, 'Quarterly Performance Reports' previous to the last quarter reckoned from the date of latest due date of submission, given by the respective project site against the contract will be the basis for evaluation.
- c) Vendors who are not executing any jobs presently in the Region and first timers to the Region, may be considered subject to satisfying all other tender conditions
- d) 'Under execution' shall mean works in progress upto Boiler Steam Blowing (for Boiler and Auxiliaries) or Synchronisation (for all other jobs including Civil) shall be considered.

- 10.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation etc before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions. No additional claim shall be entertained by BHEL in future, on account of non-acquaintance of above.
- 11.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.
- 12.0 BHEL may decide holding pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.
- 13.0 In the event of any conflict between requirement of any clause of this specification/ documents/drawings/data sheets etc or requirements of different codes/standards specified, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing error/missing pages/ other clerical errors in the tender documents, noticed must be pointed out before pre-bid meeting/submission of offer, else BHEL's interpretation shall prevail.
- 14.0 Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.

- 15.0 Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer), **if applicable**, along with techno-commercial bid. This pact shall be considered as a preliminary qualification for further participation. **The names and other details of Independent External Monitor (IEM) for the subject tender is as given at point (xi) of 1 above.**
- 16.0 The Bidder has to satisfy the Pre Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened who will be qualified for the subject job on the basis of pre-qualification evaluation/ techno-commercial bids, approval/ acceptance of customer (as applicable), etc. and date of opening of price bids shall be intimated to only such bidders.
- 17.0 In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorised representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.
- 18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) or specified otherwise in SCC of tender.
- 19.0 BHEL reserves the right to decide the successful bidder on the basis of Reverse Auction process. In such case all qualified bidders will be intimated regarding procedure/ modality for Reverse Auction process prior to Reverse Auction and price will be decided as per the rules for Reverse Auction. .
- However, if reverse auction process is unsuccessful as defined in the RA rules/procedures, or for whatsoever reason, then the sealed 'PRICE BIDS' will be opened for deciding the successful bidder. BHEL's decision in this regard will be final and binding on bidder.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 21.0 In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR, along with supporting documents.
- 22.0 The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.
- 23.0 In case Consortium Bidding is allowed as per Pre Qualifying Requirement, then Prime Bidder and Consortium Partner shall enter into Consortium Agreement. Validity period of Consortium Agreement shall be 6 months after which the same can be re validated.
- 'Stand alone' bidder cannot become a **'prime bidder' or a 'consortium bidder' in a consortium bidding**. Prime bidder shall neither be a consortium partner to other prime bidder nor take any other consortium partners. However, consortium partner may enter into consortium agreement with other prime bidders. In case of non compliance, consortium bids of such Prime bidders will be rejected. .
- 24.0 The bidder shall submit documents in support of possession of 'Qualifying Requirements" duly self certified and stamped by the authorized signatory, indexed and properly linked in the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.
- 25.0 The bidder may have to produce original document for verification if so decided by BHEL.
- 26.0 Order of Precedence  
In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:

**BHEL PSWR**  
**Notice Inviting Tender**

**Tender Specification No : BHE/PW/PUR/PDVT-ENB/749**

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- a. Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL
  - b. Notice Inviting Tender (NIT)
  - c. Price Bid
  - d. Technical Conditions of Contract (TCC)—Volume-1A
  - e. Special Conditions of Contract (SCC) —Volume-1B
  - f. General Conditions of Contract (GCC) —Volume-1C
  - g. Forms and Procedures —Volume-1D

for BHARAT HEAVY ELECTRICALS LTD

(SCT)

**Enclosure**

- 01. Annexure-1: Pre Qualifying criteria.
- 02. Annexure-2: Check List .
- 03. Other Tender documents as per this NIT.

**PRE QUALIFYING CRITERIA**

JOB	CONSTRUCTION AND DEVELOPING OF OPEN STORAGE YARD, ROADS,HARD SURFACING, FENCING, DRAINAGE AND BUNK HOUSE OFFICE COMPLEX AREA INCLUDING INTERNAL / EXTERNAL ELECTRIFICATION OF OPEN STORAGE YARD AREAS AND BUNK HOUSE OFFICE COMPLEX AREA AND RAISED CONCRETE PLATFORM ETC.AT 2X250 MW BHAVNAGAR ENERGY COMPANY LIMITED (BECL),DISTT. – BHAVNAGAR,GUJRAT.
TENDER NO	<b>BHE/PW/PUR/PDVT-ENB/749</b>

SL NO	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Name and Description of qualifying criteria ( Bidder Should Fill Up the Details in this column for PQR )	Page no of supporting document of bidders offer
A	Submission of Integrity Pact duly signed	<b>NOT APPLICABLE FOR THIS TENDER</b>	
B	Assessment of Capacity of Bidder to execute the work as per sl no 9 of NIT	<b><u>Shall be applicable for bid evaluation from 1<sup>st</sup> Jan- 2011 onwards )</u></b>	
C	<p><b><u>Technical ( Should meet a.1 or a.2 or a.3 or a.4 as below )</u></b></p> <p>Bidder must have successfully completed the work of Land Development including leveling &amp; grading <b>OR</b> WBM Road Works in the last seven years as on 30/06/2010 as below.</p> <p>a.1) Single work order of <b>Rs 2.45 Crore</b> or of more value.</p> <p style="text-align: center;"><b>OR</b></p> <p>a.2) Two work orders of <b>Rs 1.55 Crore</b> on average.</p> <p style="text-align: center;"><b>OR</b></p> <p>a.3) Three work orders of <b>Rs 1.25 Crore</b> on average.</p> <p style="text-align: center;"><b>OR</b></p> <p><b>a.4 )</b> Bidder should have empanelled in PS-WR – Nagpur in the Category C-EN-2 or C-EN-3 or C- EN-4 or C-EN-5</p>		

D.1	<p><b>Financial TURNOVER</b> Bidders must have achieved an average annual financial turnover (Audited) of <b>Rs 92.00 Lakhs</b> or more over last three Financial Years (FY) i.e 2007-08, 2008-2009, 2009-2010 or for 2006-2007, 2007-2008 and 2008-2009 if audited Annual Accounts for FY 2009-10 are not audited</p>		
D.2	<p><b>NETWORTH</b> Net worth of the Bidder based on the latest Audited Accounts as furnished for 'D1' above should be positive</p>		
D.3	<p><b>PROFIT</b> Bidder must have earned cash profit in any one of the three Financial Years as applicable in the last three years defined in 'D1' above based on latest Audited Accounts.</p>		
E	<p>Approval of Customer Note: Names of bidders who stand qualified after compliance of criteria A to D shall be forwarded to customer for their approval. Price bid of only those bidders shall be opened who are approved by customer.</p>	<b>NOT APPLICABEL</b>	
F	<p>Consortium criteria (if applicable)</p>		
<p><b>Explanatory Notes for QR 'A'</b></p> <ol style="list-style-type: none"> <li>1. The word 'executed' means the bidder should have achieved the criteria specified in the QR even if the total contract has not been completed or closed</li> <li>2. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as given above along with all annexures</li> <li>3. <b>BIDDER SHOULD ESSENTIALLY MEET ALL THE PQR ( i.e. POR- C, D1,D2,D3 &amp; E ) AS ABOVE TO GET QUALIFIED AGAINST THIS TENDER</b></li> </ol>			

**BIDDER SHALL SUBMIT ABOVE PRE-QUALIFICATION CRITERIA FORMAT, DULY FILLED-IN, SPECIFYING RESPECTIVE ANNEXURE NUMBER AGAINST EACH CRITERIA AND FURNISH RELEVANT DOCUMENT IN THE RESPECTIVE ANNEXURES IN THEIR OFFER along with copies of Work Orders, Work Completion certificates, Audited profit and Loss Account for the last three years and other related documents as per PQR & tender specification..**

**BIDDER MUST SIGN & STAMP ALL PAGES OF TECHNICAL BID-VOL-I AND SUBMIT IT WITH THEIR OFFER A PART OF TECHNICAL BID.**

**CHECK LIST**

**NOTE:- Tenderers are required to fill in the following details and no column should be left blank**

1	Name and Address of the Tenderer		
2	Details about type of the Firm/Company		
3	Details of Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Fax No:	
4	EMD DETAILS	DD No:                      Date : Bank :                      Amount: Please tick ( ✓ ) whichever applicable:- ONE TIME EMD / ONLY FOR THIS TENDER	
		APPLICABILITY	BIDDER REPLY
6	Whether the format for compliance with <b>PRE QUALIFICATION CRITERIA</b> (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable	YES / NO
7	Audited profit and Loss Account for the last three years submitted	Applicable	YES/NO
8	Copy of PAN Card submitted	Applicable	YES/NO
9	Whether all pages of the Tender documents including annexures, appendices etc are read understood and signed	Applicable	YES/NO
10	Integrity Pact	<b>Not Applicable</b>	-----
11	Declaration by Authorised Signatory submitted	Applicable	YES/NO
12	No Deviation Certificate submitted	Applicable	YES/NO
13	Declaration confirming knowledge about Site Conditions submitted	Applicable	YES/NO
14	Declaration for relation in BHEL submitted	Applicable	YES/NO
15	Non Disclosure Certificate submitted	Applicable	YES/NO
16	Bank Account Details for E-Payment submitted	Applicable	YES/NO
17	Capacity Evaluation of Bidder for current Tender	Not Applicable	-----

**BHEL PSWR**  
**Notice Inviting Tender**

**Tender Specification No : BHE/PW/PUR/PDVT-ENB/749**

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18	<b>Tie Ups / Consortium Agreement against this tender</b>	<b>Not Applicable for this tender</b>	-----
19	Power of Attorney for Submission of Tender/Signing Contract Agreement submitted	Applicable	YES/NO
20	Analysis of Unit rates submitted	Applicable	YES/NO

NOTE : STRIKE OFF 'YES' OR 'NO', AS APPLICABLE

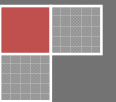
DATE :

**AUTHORISED SIGNATORY**  
(With Name, Designation and Company seal)

Rev 00  
6<sup>th</sup>  
JULY

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS LIMITED



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**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter - I : Project Information**

<b>1.0</b>	<b>Project Information</b>
<b>1.1</b>	<p style="text-align: center;"><b><u>GENERAL PROJECT INFORMATION</u></b></p> <p>1. Owner / Purchaser : Bhavnagar Energy Company Limited</p> <p>2. Consultant : TCE Consulting Engineers Limited</p> <p>3. Project Title : 2 x 250 (+20 % Maximum) MW Lignite Based TPP</p> <p>4. Location : Near Village Padva, Taluka Ghogha District Bhavnagar in the state of Gujarat in India</p> <p>5. Nearest Railway Station: Bhavnagar, 25 Kms from the plant location</p> <p>6. Site Elevation : 34.0 to 42.0 m above mean sea level</p> <p>7. Access Road : 1 Km from State Highway (SH-25/1)</p> <p>8. Nearest Airport : Bhavnagar</p> <p>9. Nearest Sea port : Pipavav</p> <p>10. Latitude of site : 21 deg 35 minutes North</p> <p>11. Longitude of site : 72 deg 14 minutes East</p> <p>12. Metrological Data :</p> <p>A. Temperature</p> <p style="padding-left: 20px;">i. Average Max. Temp: 33.6 deg. C</p> <p style="padding-left: 20px;">ii. Average Min. Temp: 21.1 deg. C</p> <p style="padding-left: 20px;">iii. Highest Max. Temp: 43.5 deg. C</p> <p style="padding-left: 20px;">iv. Lowest Min. Temp: 7.7 deg. C</p> <p>B. Relative Humidity</p> <p style="padding-left: 20px;">i. Maximum : 62 %</p> <p style="padding-left: 20px;">ii. Minimum : 44 %</p> <p style="padding-left: 20px;">iii. Average : 63 %</p> <p>C. Rainfall</p> <p style="padding-left: 20px;">i. Annual Variation : 676.2 mm to 1856.3 mm</p> <p style="padding-left: 20px;">ii. 1203.90 mm</p> <p>D. Wind data</p> <p style="padding-left: 20px;">i. Basic Wind speed : 55 m/sec</p> <p>13. Seismic data : As per IS: 1893</p> <p style="padding-left: 20px;">i. Zone : III</p>

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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### 2.0 SCOPE OF WORK

The scope of work comprises of but not limited to the following: -

- 2.1 Open storage yard development, leveling and consolidation (**approx.90000 sqm**) including removal of dense grass, vegetations, wild growth, trees etc. from open storage yard
- 2.2 Construction of internal roads, drainage, hard surfacing, fencing, gates for open storage yard, Providing and laying RCC Hume pipe culvert as per site requirement.
- 2.3 Cabling, electrification and Illumination of open storage yard including cabling from main source of supply (Customer point) and distribution to external panels of store sheds and bunk house complex area.
- 2.4 Misc. works for bunk house office complex area:
  - i. Construction of Brick Pedestals for placing of proposed Porta cabins / bunk house.
  - ii. Construction of raised platform for porta-cabins, concrete paving/ pathway /walk way around the bunk house office complex area including area grading, curved type FRP / RMP sheet roofing , fencing, gate and associated electrical works.
  - iii. Construction of cast in-situ pantry and toilet blocks with RCC roof slab for placing of Over Head Water Tank.
  - iv. Sanitary works such as septic tank soak pits, sewer line and connection with bunk house.
- 2.5 Construction of Raised Concrete Platform of size 15m X 30m - 1 No. for storage of important consignment/pressure parts etc.

All the above jobs shall be as per BHEL Engineer's instructions, drawings, detailed specification and respective bill of quantities furnished in the Rate Schedule.

### 2.6 Responsibility of the Contractor

The contractor shall engage all the unskilled, skilled and especially skilled labour including fabricators, welders and fitters etc. and supervisory staff. Only trained and competent personnel with previous experience in the job shall be employed. However, BHEL reserves the right to decide on the suitability of the workers and other personnel who will be employed by the contractor. BHEL reserves the right to insist on removal of any employee of the contractor at any time, if they found him unsuitable. The contractor shall be bound to follow the instruction of BHEL.

#### 2.6.1

All the materials like steel, windows , doors, ventilators, rolled shutters, trusses, structural members, foundation bolts, MS bars, painting materials, G.I. Sheets, MS square bar and necessary electric goods etc. shall be supplied by the contractor as per the specification mentioned in the tender/Indian standard specification. The contractor is required to quote their rates inclusive of cost of all materials, labour, etc. BHEL reserves the right to inspect and reject any material not found satisfactory.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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### 2.7 General

#### 2.7.1

During execution of the job, it is very essential that proper and adequate inspection should be made constantly by the contractor to maintain quality of workmanship and to ensure that deviations from BHEL drawings not exceed the permissible limits, which shall be approved by BHEL. **The contractor shall submit test reports of all materials being procured by them for the job and also offer for inspection by BHEL. All the testing charges shall be borne by the contractor.** BHEL engineer shall carry out the inspection of quality of material being purchased/arranged, quality/composition of materials used during construction work and workmanship. Decision of BHEL engineer shall be binding on the contractor.

Contractor shall furnish the manufacturers test certificate for the steel & cement procured by them. Apart from this all the field test shall be arranged by contractor for cement, bricks, coarse & fine aggregates either at site or near by Field Quality Lab. approved by BHEL if so desired by BHEL's engineer. All the expenses in these regards shall be borne by contractor.

Contractor shall procure reinforced/ structural steel & cement from reputed manufacturer & approval for the same shall be obtained from BHEL well in advance before ordering for the materials.

#### 2.7.3

The contractor shall visit the site and ascertain the local conditions, entry and traffic restrictions, all obstructions in the area and also ascertain all site conditions and particularly the sub-soil conditions etc. **The contractor shall carry out the survey to study the properties of soil/sub soil like strength to withstand the weight of structure during all weather conditions without sinking of foundation.** If any of such defects like cracks, sinking of foundation etc. occur after completion of work till the performance guarantee period, it shall be rectified by contractor free of cost including the supply of materials required. No claim shall be entertained on this account under any circumstances from the contractor.

#### 2.7.4

The contractor shall provide and maintain at his own cost pumps and other equipment to keep the work free from water and continue to do so until the handing over of the work. The contractor shall clear all trees, rubbish, vegetation, brickbats etc. And dispense them suitably in allotted areas at his own cost.

#### 2.7.5

The contractor shall take adequate precautions to ensure complete safety and prevention of accidents at site. The safety precautions shall conform to IS codes wherever applicable.

#### 2.7.6

The contractor shall level the site in accordance with the sequence of earth leveling to maintain the proper gradient as per the instruction of BHEL; as soon as construction activity is over. Payment towards this shall be released as per the relevant items available in B.O.Q.

#### 2.7.7

The work though not specifically mentioned either in the drawings or in the tender specification but are needed to complete the work as per site requirement & instruction of Engineer are also in the scope of this contract & to be erected to the entire satisfaction, for which the payment

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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shall be released as per the respective item rate of **Rate Schedule**. **If the item is not available in the rate schedule the rate shall be derived as per CPWD- DSR-2007 rate schedule latest version with applicable escalation.**

.2.7.8

The contractor shall provide and maintain at his own cost all T & P for carry out the work. The T & P shall be for fabrication of the structures and for the purpose of erection of columns, trusses, purlins bracings etc complete.

**2.8**

**The detailed tentative drawings and specifications will form part of the tender documents. BHEL reserves the right to modify/alter the tender drawings, if necessary during the actual execution at site.**

**2.8.1 Specification for Civil Works for various Sheds, Open Storage Yard Roads & Drains and its electrification work, Porta cabins area development and its electrification, Raised concrete platform and Approach road from yard to plant area.**

**4.8.2**

Standard specifications for various items of work for building and road construction as per the relevant IS-codes (latest edition) shall be applicable for this work. The work has to be executed as per standard specification and drawings to the satisfaction of BHEL. However, the following Drawings/Sketches are to be read along with specifications and shall be treated as in the scope of work. Please refer **Appendix – VII for drawings**.

**2.8.3**

**These drawings are indicative and strictly for tendering purpose, only meant to give an idea to tenderers about nature of job.** If any changes in the layout, plan, section, partition, truss, columns etc. are felt necessary by BHEL Engineer to suit site requirement, the same shall be done by contractor as per revised sketches/drawings given by BHEL engineer. Contractor shall ensure/ascertain the stability, safety of the said work. Any modification/variation from the said drawings, if necessary as suggested by the contractor will have to be approved by BHEL in writing.

**2.9 Preparation of actual layout and BOQ as per site condition.**

- (a) BOQ & drawing given in tender is tentative only as the tender is prepared on the basis of preliminary information which may vary during execution as per actual site condition. As soon as the area for construction of bunk house office and open yard etc. is taken over from BHEL/customer, Contractor has to ensure actual layout of bunk house office and open storage yard, roads, drains and raised concrete platform etc. after doing detailed survey of site. Contractor shall submit detailed survey report after plotting in graph sheet along with actual BOQ for each & every work - section wise and submit the same to BHEL for further comparison with the respective BOQ. All endeavors have to be made to restrict the quantities as per BOQ except some "exceptional cases" which are very necessary due to site condition. Individual item qty. variation may be allowed up to reasonable extent unless the overall executed value of the contract is within the LOA

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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value. For any variation beyond the total contract value, prior approvals are required from BHEL PSWR HQ before release of payment.

- (b) Item of one Section can be utilized for another Section also (if it is required but not available) being "One Contract". This can be used judiciously to avoid extra items. Measurement of work done shall be recorded in respective section of the item indicating the area of usage.

### 2.9.1

Excavation of Foundation, Roads and Trenches etc shall be made as per IS specification.

### 2.9.2

Any filling/loose soil met below the foundation shall be made up with lean cement concrete 1:4:8 mix (min).

### 2.9.3

Basement and sides of the foundation wall shall be filled in with selected excavated earth including watering, consolidation etc. Complete as per IS specification.

### 2.9.4

**The excess/unutilized suitable earth and debris shall be disposed & leveled to the proposed mentioned area for development. All unusable earth debris, trees, vegetations etc. shall be disposed off at a location embarked by BHEL / Client. Rate quoted for excavation shall be inclusive of such disposal.**

### 2.9.5

Filling under floors / foundations with 100mm/150mm thick layer of compacted selected earth/river sand including watering, consolidation etc. shall be executed as per IS specification and drawings if any. However this can be eliminated in case a hard strata/good stratum is met with in foundation level & PCC shall be done directly in such cases. However this can be decided as per site requirement with discussion with site engineer.

### 2.9.6

**PCC:** below foundation and PCC capping: This shall include supplying and placing PCC at all depths below plinth level including form work, curing, all materials, tools and plants and labour complete. Concrete of 1:4:8/1:3:6/1:2:4 grade as defined in IS- 456 with 40mm/20mm and downgraded stone aggregates as per drawing. Nominal mix (volumetric) shall be allowed to use as per the guidelines of IS-456 (latest edition) with min. W/C ratio & cement content as per IS stipulation for moderate condition. Concrete shall be produced by concrete mixer machine & hand mix is generally not acceptable.

**However in certain unavoidable circumstances, hand mix shall be permitted with 10% extra cement content as per the discretion of BHEL engineer.**

### 2.9.7

**Brick masonry:** Brick masonry shall be done by using best quality locally available burnt clay bricks / Fly Ash Lime (FAL) bricks of standard size. Minimum strength of the bricks should not be less than 35 KG/sq. cm. Other quality requirement shall be in line with the relevant IS Code. One-brick thick brickwork shall be constructed as specified, in Cement mortar 1:4 including

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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linking, plumbing, leveling, pacing, joints curing etc. Including all materials, tools, plants and labour complete at all level/elevation.

**Rubble masonry:** Rubble masonry shall be done by using best quality locally available hard stone (black basalt) in foundation/wall. BHEL should be approved quality of stone before placing in use. Irregular hard stones should be rounded of before use. Maximum size of stone should be between 200 – 230mm.

2.9.8

**RCC:** RCC 1:2:4 shall be provided for column foundations, pedestal, lintel, sun sheds and roof slab as per IS specification.

2.9.9

**Formwork:** The formwork should be capable of carrying the dead load of concrete, the reinforcements and the forces of vibration. The form works shall be designed by the contractor and approved by engineer in charge. After sufficient curing period & after attaining adequate strength of concrete the formwork shall be removed with the approval of BHEL engineer. The item of PCC/RCC shall be deemed as completed after removal of forms and required finishing is completed.

2.9.10

Roof cover with FRP/RMP ( 2.0mm thick) sheet for natural lighting shall be provided with suitable 'J' bolts, GI Cup Washers, GI Plain Washers, and Bitumen Washers etc. Wind ties for protection against lifting of roof by wind etc if any. as per standard practice shall be provided by the contractor.

2.9.11

Two coats of Black tar paint shall be provided for the wooden work used in ceiling as per IS specification.

2.9.12

**Structural works:**

All structural works like roof truss, columns etc. shall be carried out as per drawing given along with the tender. All Associated Fitting materials shall be paid by weight along with the truss.

2.9.13

Contractor is permitted to get steel truss & other structures fabricated at workshop outside of the plant premises with prior permission of BHEL. In this case contractor has to arrange for shop inspections periodically as required by BHEL Engineer to ensure the quality of fabrication work. Fabricated structures without inspection/certified by BHEL shall not be allowed for erection.

2.9.14

Necessary sanitary and plumbing works shall be provided with necessary water taps and all connections with supply lines/septic tank shall be provided by the contractor for BHEL storage office and open yards. The materials used and the location etc. shall be as per the directions of BHEL engineer.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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### 2.9.15

Septic tanks with soak pit/leaching cesspool shall be provided by the contractor at the location specified by BHEL complete in all respects as per IS specification. (Suitable for capacity of 25 users as per item rate available in the rate schedule). **The drawing attached with tender is indicative only & any changes required at site shall be done as per the instruction of BHEL Engineer.**

### 2.10 Fencing work

#### Barbed Wire Fencing

The fencing shall be with MS angles post **50x50x6 mm size – 2M** high (above G.L.) as instructed by engineer in charge, and fixed at every 3M interval with **PCC 1:3:6, 0.30 M x 0.30 M x 0.45 M deep**. It shall be supported with MS angle struts of ISA 50x50x6 every 30M and all turnings on both sides. Barbed wire shall be 10 horizontal and 2 diagonal and shall conform to IS: 278, shall be made of 2 strands of galvanized twisted 2.5 mm (12.5 gauge) steel wire with 4 point barbs. The barbs shall have a length of not less than 13mm and not more than 18mm. (For further details Refer relevant item of BOQ & Drawings).

### 2.16 Electrical Installations

#### 2.16.1 General

##### 2.16.1.1

The electrical installation shall generally be carried out in conformity with the requirements of the Indian electricity act, 1910 as amended up to date and the Indian electricity rules, 1956 framed there under and also the relevant regulations of the electric supply authority concerned as well as IS: 732-1963 (revised). **Before commencement of work Contractor has to submit detail electrical layout drawings prepared by experienced & licensed electrical agency/engineer indicating the cable route, internal/external panels, cable sizing, fittings & fixtures etc. in line with the BOQ for open storage yard area and bunk house office complex .**

##### 2.16.1.2

Good workmanship is an essential requirement for compliance with the rules in the code. The work shall be carried out under the direct supervision of a person holding a valid certificate of competency issued by the state government concerned for the type of work involved.

##### 2.16.1.3

All out door/external lamps shall have weatherproof fittings of design approved by BHEL Engineer so as to effectively prevent the admission of moisture.

##### 2.16.1.4

The distribution fuse boards shall be located as near as possible to the center of the load they are intended to control.

##### 2.16.1.5

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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All main switches shall be of metal clad enclosed pattern, which shall be fixed at close proximity to the point of entry of supply.

### 2.16.1.6

Main and branch distribution boards shall be in accordance with Indian standard 732-1963 "code of practice for electrical wiring installation".

### 2.16.1.7

PVC conduit (concealed type) wiring system should be adopted through out and all conduit pipes/channel shall be conforming to latest IS.

### 2.16.1.8

Approved and good quality copper wire with adequate current carrying capacity/voltage rating with proper insulation as per IS should be used for the entire electrical wiring/installation.

### 2.16.1.9

The service connection from outside mains to the switchboard inside the building shall also be carried out by the contractor.

## 2.17 Earthing

### 2.17.1

All earthing system shall be in accordance with IS: 3043-1966 "code of practice for earthing".

### 2.17.2

The installation and earthing shall generally be carried out in accordance with the Indian electricity rules 1956 as amended from time to time and the relevant regulations of the electricity supply authority concerned.

### 2.17.3

All plugs and sockets shall be of three-pin type, one of the pins being connected to earth.

### 4.6.2.4

Bodies of all electrical appliances shall be earthed by the use of three pin plugs. The covers of the regulators if of metallic construction, shall be earthed by means of a separate earth wire. A separate earth wire shall be used for earthing these appliances.

### 2.17.3

All earth wires and earth continuity conductors shall be of copper/-galvanized iron. They shall be either stranded or solid bars of flat rectangular strips and may be bared, provided, due care is taken to avoid corrosion and mechanical damage to it. Inter connections of earth continuity conductors and main and branch earth wires shall be made in such a way that reliable and good electrical connections are permanently ensured.

### 2.17.4

The neutral conductor shall not be used as earth wire.

### 2.17.5

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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Welded, bolted and clamped joints only are permissible. For stranded conductor, sleeve connectors are permissible. Bolted connectors and their screws shall be protected against any possible corrosion.

### 2.17.6

The path of the earth wire shall, as far as possible, be out of reach of any person and shall be visible for inspection.

### 2.17.7

The galvanized iron pipe electrodes shall not be smaller than 38mm internal diameter and shall not be less than 3.5M. In length and shall, as far as possible, be embedded below permanent moisture level and shall be one piece only without any joints.

### 2.17.8

**Dewatering** : It is the responsibility of the contractor to engage sufficient dewatering pump (Diesel, electrically operated) of adequate capacity for dewatering of sub-soil, rain water from excavated pit and other localized area and keep the area dry and workable till completion of entire work within their quoted rate.

## 2.18 GENERAL NOTES FOR STEEL DOOR, WINDOWS, AND VENTILATORS

### 2.18.1 STEEL/ IRON WORK

**Steel Door**: - Pressed steel doors as per standard specification, relevant IS code and sizes shall be supplied along with frames and fixed with suitable hold fasts, furniture and fittings.

**Steel Window**: - All steel Windows shall be supplied and fixed as per standard specifications, relevant IS code and instructions of Engineer-in-charge with all furniture, fittings, holdfasts etc. Complete.

**Steel ventilators**: - All steel ventilators shall be supplied and fixed as per standard specifications, relevant IS code and instructions of Engineer-in-charge with all furniture, fittings, holdfasts etc. Complete.

Contractor shall arrange for shop inspection for all steel doors, windows, rolling shutters & trusses etc. if fabricated outside the plant. Before delivery at site for Engineer's clearance.

### 2.18.2

#### PAINTING

All the steel items such as doors, windows, ventilators, roof trusses, columns, purlins etc. shall be supplied with one coat of red oxide primer; two coats of synthetic enamel paint of approved color and quality shall be applied after fixing in position to achieve uniform finishing. Rates shall be quoted taking into account cost of painting for woodwork, steel work etc.

### 2,18.3

Three coats of white/color washing shall be provided uniformly on all wall surfaces as per IS specification.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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### 2.18.4

PVC water tank of Sintex or any approved make shall be supplied and erected on brick pillars or steel staging and to be constructed on location shown as per item rate given in rate schedule.

### 2.19 Specification of roofing structure for bunk house office complex.

#### 2.19.1 General

##### 2.19.1.1

This specification covers the roofing structure of **bunk house office complex**. Pre-fabricated tubular/structural steel trusses (curved type) shall directly rest on bunk house column structures and posts with suitable arrangements of bolting.

##### 2.19.1.2

The scope under this specification shall cover trusses with tubular (**CLASS B-MEDIUM QUALITY**) /structural steel made up of MS rolled sections, purlins, batten tie runners, and fixing bolts for trusses. FRP/RMP sheets for roofing complete with J-bolts, I-bolts, gutters and down pipe (if any) etc. Any other item not specifically mentioned but required for completion of the structure shall be deemed to have been included in this specification.

##### 2.19.1.3

The trusses shall be tubular (**CLASS B-MEDIUM QUALITY**), fabricated in pieces of convenient length for transportation by truck and speedy erection at site. The base plates shall be welded to the trusses for fixing/resting the same on supports. Suitable cleats or fixing plates shall be provided on the trusses for holding the purlins and the bottom tie runners. Bolts shall be fixed in columns and posts by using templates for fixing truss. These foundation bolts shall be paid under structural items of rate schedule whereas base plates, cleats etc. fixed with truss shall be paid under tonnage of truss only. No separate payment shall be made for templates. Work shall be done as per BHEL Drawings.

##### 2.19.1.4

The purlins and bottom tie runners shall be of structural steel sections or steel tubes of adequate size to give proper strength and rigidity. 2.00mm thick FRP/RMP sheets shall be used for the roof of the bunk house complex area. The sheet shall be of standard size for trusses, FRP/RMP sheets for roofing complete and shall conform to IS 459. The sheets shall be fixed to purlins with galvanized J or I bolts. GI cup washers and bitumen washers shall be provided where holes are made in FRP/RMP sheets to prevent any water leakages. Fly strips shall be provided over the FRP/RMP sheets for additional protection against storms. Providing & fixing 'J' bolts, washers etc. shall be a part of FRP/RMP sheet fixing & no separate weight shall be paid for this.

##### 2.19.1.5

All the bolts, nuts and washers supplied for the assembly of the structure shall be hot dipped galvanized and of metric sizes. All the members shall be given two coats of anti-rust red oxide primer paint after proper cleaning of the surface.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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### 2.19.1.6

All the members of the structure shall be of standard dimensions and shall provide complete flexibility for assembling in the required number of days. The expansion of the structure in lengthwise direction shall be possible with minimum dismantling of the existing members.

### 2.20

**Providing & laying of pipelines for Water supply to storage shed as well as for construction purpose:**

**BECL** (Customer) will provide construction water and drinking water supply at single point (**approx. 500m**) inside the plant free of cost. Main supply pipe line of 40mm dia. GI pipe shall be laid up to the Overhead water tank near **Porta Cabin / Bunk House Office** location for water supply to BHEL office premises. Internal plumbing if any shall be done in BHEL Store office toilet blocks as per requirement through 25mm/20mm/ 15mm dia GI pipes as per requirement. However contractor has to arrange tankers or further distribution pipeline up to the work site for Construction purpose from this point within their quoted rates.

### 2.21

#### **Prior Approval from BHEL Engineer**

Contractor shall take prior approval from BHEL Engineer for use of Sanitary items, FRP/RMP sheets, Overhead water tanks, Doors, Windows, ventilators **Type of Cement (OPC/PPC)**, Brick, Steel, structural steel and for other items as specified in respective items description and necessary manufacturer's test certificate (MTC) and laboratory test as required by BHEL shall be arranged by contractor within their quoted rate.

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – III : Facilities in the scope of Contractor/BHEL**

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Sl.No	Description	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.1	<b>ESTABLISHMENT</b>			
3.1.1	<b>FOR CONSTRUCTION PURPOSE:</b>			
a	Open space for office (as per availability)	Yes		Location will be finalized after joint survey with owner
b	Open space for storage(as per availability)	Yes		Location will be finalized after joint survey with owner
c	Construction of bidder's office, canteen and storage building including supply of materials and other services		Yes	
d	Bidder's all office equipments, office / store / canteen consumables		Yes	
e	Canteen facilities for the bidder's staff, supervisors and engineers etc		Yes	
f	Fire fighting equipments like buckets, extinguishers etc		Yes	
g	Fencing of storage area, office, canteen etc of the bidder		Yes	
3.1.2	<b>FOR LIVING PURPOSES OF THE BIDDER</b>			

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – III : Facilities in the scope of Contractor/BHEL**

Sl.No	Description <b>PART I</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
a	Open space for labour colony (as per availability)	Yes		Space will be provided about 5 KM. from main entry gate on availability Location will be finalized after joint survey with owner
b	Labour Colony with internal roads, sanitation, complying with statutory requirements		Yes	
3.2.0	<b>ELECTRICITY</b>			
3.2.1	<b>Electricity For construction purposes 3 Phase of Voltage 415/440 V (to be specified whether chargeable or free)</b>			FREE
a	Single point source	Yes		At a distance of 500M from site (Distance is only estimated, it may vary upto an extent depending on site condition)
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.2.2	<b>Electricity for the office, stores, canteen etc of the bidder .</b>			Chargeable(Applicable Tariff)

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – III : Facilities in the scope of Contractor/BHEL**

Sl.No	Description <b>PART I</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
a	Single point source	Yes		At a available distance from site (Distance may vary up to an extent depending on site condition)
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.2.3	<b>Electricity for living accommodation of the bidder's staff, engineers, supervisors etc</b>	Yes		Chargeable(Applicable Tariff)
a	Single point source	Yes		At a available distance from site (Distance may vary up to an extent depending on site condition)
b	Further distribution including all materials, Energy Meter, Protection devices and its service		Yes	
c	Duties and deposits including statutory clearances if applicable		Yes	
3.3.0	<b>WATER SUPPLY</b>			

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – III : Facilities in the scope of Contractor/BHEL**

Sl.No	Description <b>PART I</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.3.1	<b>For construction purposes:</b>			FREE
a	Making the water available at single point	Yes		In case of inadequate supply / non-availability of construction water from customer, contractor shall have to arrange construction water at his own expenses .
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.2	<b><u>Water supply for bidder's office, stores, canteen etc</u></b>	<b>YES</b>		Free of cost at one point and Contractor has to make suitable arrangement at their own cost for all purpose.
a	Making the water available at single point	Yes		
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.3.3	<b><u>Water supply for Living Purpose</u></b>	<b>YES</b>		Free of cost at one point and Contractor has to make suitable arrangement at their own cost for all purpose.

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – III : Facilities in the scope of Contractor/BHEL**

Sl.No	Description <b>PART I</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
a	Making the water available at single point	Yes		
b	Further distribution as per the requirement of work including supply of materials and execution		Yes	
3.4.0	<b>LIGHTING</b>			
a	For construction work (supply of all the necessary materials) 1. At office/storage area 2. At the preassembly area 3. At the construction site /area		Yes	
b	For construction work (execution of the lighting work/ arrangements ) 1. At office/storage area 2. At the preassembly area 3. At the construction site /area		Yes	
c	Providing the necessary consumables like bulbs, switches, etc during the course of project work		Yes	
d	Lighting for the living purposes of the bidder at the colony / quarters		Yes	
3.5.0	<b>COMMUNICATION FACILITIES FOR SITE OPERATIONS OF THE BIDDER</b>			

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – III : Facilities in the scope of Contractor/BHEL**

Sl.No	Description <b>PART I</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
a	Telephone, fax, internet, intranet, e-mail etc		Yes	
3.6.0	<b>COMPRESSED AIR wherever required for the work</b>			<b>Not Required</b>
3.7.0	<b>Demobilization of all the above facilities</b>		<b>YES</b>	
3.8.0	<b>TRANSPORTATION</b>			
a	For site personnel of the bidder		Yes	
b	For bidder's equipments and consumables (T&P, Consumables etc)		Yes	

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – III : Facilities in the scope of Contractor/BHEL**

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SI.No	Description <b>PART II</b> <b>3.9.0 ERECTION FACILITIES</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
3.9.1	Engineering works for construction:			NOT APPLICABLE
a	Providing the erection/constructions drawings for all the equipments covered under this scope	Yes		<b>For Details PI refer Chapter-II-</b>
b	Drawings for construction methods	Yes	Yes	In consultation with BHEL
c	As-built drawings – where ever deviations observed and executed and also based on the decisions taken at site- example – routing of small bore pipes			NOT APPLICABLE
d	Shipping lists etc for reference and planning the activities			NOT APPLICABLE
e	Preparation of site erection schedules and other input requirements		Yes	In consultation with BHEL
f	Review of performance and revision of site erection schedules in order to achieve the end dates and other commitments	Yes	Yes	In consultation with BHEL
g	Weekly erection schedules based on SI No. e		Yes	In consultation with BHEL

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – III : Facilities in the scope of Contractor/BHEL**

SI.No	Description <b>PART II</b> <b>3.9.0 ERECTION FACILITIES</b>	Scope / to be taken care by		Remarks
		BHEL	Bidder	
h	Daily erection / work plan based on Sl No. g		Yes	In consultation with BHEL
i	Periodic visit of the senior official of the bidder to site to review the progress so that works are completed as per schedule. It is suggested this review by the senior official of the bidder should be done once in every two months.		Yes	
j	Preparation of preassembly bay			NOT APPLICABLE
k	Laying of racks for gantry crane if provided by BHEL or brought by the contractor/bidder himself			NOT APPLICABLE
L	Arranging the materials required for preassembly			NOT APPLICABLE

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – IV: T&Ps and MMEs to be deployed by Contractor**

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**A: TOOL & PLANTS**

SN	DESCRIPTION
1	<p>Concrete Mixture -2nos</p> <p>2) Vibrators- 2nos</p> <p>3) Leveling instrument with calibration certificate as per required</p> <p>4) Theodolite with calibration certificate as per required</p> <p>5) Shuttering materials as per requirement</p> <p>6) Cube moulds required nos and testing arrangement</p> <p>7) Slump testing cone as required</p> <p>8) Pump with Motor required for curing</p> <p>9) Power generator (of Minimum 63 KVA )-1No</p> <p>10) Diesel/Petrol/Electric Pump set (2.5 HP )-4no</p> <p>11) Electric Water Pump (1.5HP )-2no</p> <p>12) Welding Transformer-3nos</p> <p>13) Gas cutting Set- 3 Nos</p> <p>14 )Drilling Machine- 2Nos</p> <p>15)JCB- 1No</p> <p>16) Water Tanker- 1No</p> <p>17) Road Roller- 2 No</p> <p>18) Tractor- Trailer- 2No</p> <p>19)Tripper-2Nos</p> <p>20 )Chain Pulley Block (3T)- 3No</p> <p>21) Grinding Machine-2Nos</p> <p>22) Fire extinguishers &amp; Fire Buckets-2Nos</p> <p>NOTE</p> <p>The above list is only indicative and not exhaustive. Arrangement for any other T and P required for completion of the job shall be the responsibility of the contractor and shall be arranged by him.</p>

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – IV: T&Ps and MMEs to be deployed by Contractor**

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**B: MEASURING AND MONITORING DEVICES (MMD):**

AS PER REQUIREMENT TO BE FINALIZED AT SITE.

**NOTE :**

THIS ABOVE LIST IS ONLY INDICATIVE AND NEITHER EXHAUSTIVE NOR LIMITING. QUANTITIES INDICATED ABOVE ARE ONLY THE MINIMUM REQUIRED. CONTRACTOR SHALL DEPLOY ALL NECESSARY T&P TO MEET THE SCHEDULES & AS PRESCRIBED BY BHEL ENGINEER AND REQUIRED FOR COMPLETION OF WORK.

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – V: T&Ps and MMEs to be deployed by BHEL on sharing  
basis**

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**BHEL WILL NOT PROVIDE ANY MATERIAL OR ANY T & P's FOR THIS WORK**

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – VI: Time Schedule**

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**6.1 TIME SCHEDULE & MOBILIZATION**

**6.1.1 INITIAL MOBILIZATION AND TENTATIVE SCHEDULE**

Contractor shall reach site, make his site establishment and be ready to commence the work within two weeks from the date of fax Letter of Intent or as per directions of Construction Manager/ Project Manager of BHEL.

The contractor has to subsequently augment his resources in such a manner that the entire related works are completed to achieve the following **tentative** schedule:

**Milestone activities - Break up activities completion period:**

<b>SR.NO.</b>	<b>MILESTONE ACTIVITY</b>	<b>PERIOD</b>
1	Area development, platform, sanitary line / septic tank for Porta cabin / bunk house office complex and distribution work for construction and drinking water.	one (1) month from the date of mobilization at site
2	Remaining work of Porta cabins / bunk house office complex area including cast in – situ pantry and toilet block & its internal and external electrification.	One and half (1.5) month from the date of mobilization at site.
3	Development of Open Storage area 50% along with Roads, Drains, hard surfacing, fencing and illumination.	Three (3) months from the date of first excavation at site.
4	Construction of raised concrete platform – 1 No. at open storage yard	One and half (1.5) months from the date of first excavation at site.
5	Balance 50% development of Open Storage area along with Roads , Drains, hard surfacing, Fencing around Open Storage area and other left out misc. jobs	Six (6) months from the date of first excavation at site in phased manner
6	Cabling and External Lighting of Yard.	Seven (7) months from the date of first excavation at site.

THE OVERALL CONTRACT PERIOD SHALL BE **7(SEVEN) MONTHS**.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – VI: Time Schedule

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### **6.1.2**

In order to meet above schedule and other intermediate targets/activities as set by BHEL Engineer In charge at site, to meet customer requirements/project schedule, contractor shall arrange all necessary resources and work force in consultation with BHEL engineer at site to under take works concurrently in all possible fronts as made available to contractor.

CONTRACTOR SHALL NOTE THAT INDIVIDUAL MILESTONES AS ABOVE SHALL BE ACHIEVED AS PER SCHEDULE FURNISHED ABOVE. THE DATE OF START OF FIRST EXCAVATION SHALL BE RECKONED AS THE START OF CONTRACT PERIOD FOR THIS PURPOSE.

THE CONTRACTOR SHALL REACH SITE AND ESTABLISH HIS SITE OFFICE AND MOBILIZE NECESSARY RESOURCES WELL IN ADVANCE OF ACTUAL COMMENCEMENT OF THE CONTRACT TIME SCHEDULE AS PER DIRECTIONS OF BHEL ENGINEER. THE DATE OF COMMENCEMENT FOR THE PURPOSE OF CLAUSE

**DATE OF START OF WORK SHALL BE THE DATE ON WHICH FIRST EXCAVATION WORK IS STARTED.**

The contractor shall complete all the work in the scope of this contract within the contract period

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-VII: Terms of Payment

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### **Stages of Progressive Payments**

12.1.4.1

The percentage of payment for progressive completion of work in various categories of work shall be as under:

- A) 100% of agreed item rate will be released for the completed work against monthly R.A. bills.

The RA bill payment shall be made as made as per Cl no 10.0 of Chapter –X of SCC ( page-44 )

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-VIII: Taxes and Other Duties

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### TAXES, DUTIES, LEVIES

#### 8.0

Refer to Clause 2.8.4 of General Conditions of Contract. Notwithstanding anything contained therein, the following provisions shall be applicable for this contract.

#### 8.1.1

The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, VAT/WCT, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit (**i.e. rate quoted by bidder shall be inclusive of all Taxes and Duties, VAT/WCT except Service Tax**).

However, provisions regarding Service Tax on output services and goods shall be as per following clauses.

#### 8.1.2 Service Tax & Cess on Service Tax

Service Tax and Cess on Service Tax as applicable on output Services are excluded from contractor's scope; therefore contractor's price/rates shall be **exclusive** of Service Tax and Cess on Output Services. In case, it becomes mandatory for the contractor under provisions of relevant act/law to collect the Service Tax & Cess from BHEL and deposit the same with the concerned tax authorities, such applicable amount will be paid by BHEL.

**Contractor shall submit to BHEL documentary evidence of Service Tax registration certificate specifying name of services covered under this contract. Contractor shall submit serially numbered Service Tax and Cess Invoice, signed by him or a person authorized by him in respect of taxable service provided, and shall contain the following, namely,**

- I. The name, address and the registration number of the contractor,
- II. The name and address of the party receiving taxable service,
- III. Description, classification and value of taxable service provided and,
- IV. The service tax payable thereon.

**All the four conditions shall be fulfilled in the invoice before release of service tax payment.**

**Contractor shall obtain prior written consent from BHEL before billing the amount towards such taxes.**

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-VIII: Taxes and Other Duties

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With introduction of Cenvat Credit Rules 2004, which came into force w.e.f. 10.09.2004, Excise Duty paid on Input Goods including Capital Goods and Service Tax paid on Input Services that are used for providing the output services can be taken credit of against the Service Tax payable on output services. However BHEL may opt for availing the abatement provision in which case cenvat credit may not be available on input duty.

### 8.1.3 Modalities of Tax Incidence on BHEL

Wherever the relevant tax laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL will have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Contractor.

### 8.1.4 New Taxes/Levies

In case the Government imposes any new levy/tax on the output service/ goods/work after award of the contract, the same shall be reimbursed by BHEL at actual.

In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer, the Bidder/Contractor must convey its impact on his price duly substantiated by documentary evidence in support of the same **before opening of Price Bid**. Claim for any such impact after opening the Price Bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

No reimbursement/recovery on account of increase/reduction in the rate of taxes, levies, duties etc. on input goods/services/work shall be made. Such impact shall be taken care of by the Price Variation/Adjustment Clause (PVC) if any. In case PVC is not applicable for the contract, Bidder has to make his own assessment of the impact of future variation if any, in rates of taxes/duties/ levies etc. in his price bid.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-IX DRAWINGS

FOLLOWING DRAWINGS ARE ENCLOSED WITH THE TENDER.

SL.NO.	DRAWING/SKETCH No.	TITLE
1.	BHE/PW/OY-01	LAYOUT FOR OPEN STORAGE AREA
2.	BHE/PW/OY-02	SECTIONAL DETAILS OF WBM ROADS AND HARD SURFACING.
3.	BHE/PW/OY-03	DRAIN DETAILS 0.4M DEPTH
4.	BHE/PW/OY-04	DRAIN DETAILS 0.5M DEPTH
5.	BHE/PW/OY-05	DRAIN DETAILS 0.6M DEPTH
6.	BHE/PW/OY-08	DRAIN DETAILS 1.0M DEPTH
7.	BHE/PW/OY-09	CULVERT DETAILS FOR 400MM DIA. RCC HUME PIPE
8.	BHE/PW/OY-10	CULVERT DETAILS FOR 600MM DIA. RCC HUME PIPE
9.	BHE/PW/OY-11	DETAILS OF BARBID WIRE FENCING
10.	BHE/PW/ ST.SP-01	SEPTIC TANK
11.	BHE/PW/ ST.SP-02	SECTION OF BAFFLE BEAM
12.	BHE/PW/ ST.SP-03	DETAILS OF SOAK PIT
13.	BHE/PW/PO-01	BRICK PEDESTAL BLOCK FOR PROPOSED PORTA CABIN OFFICE
14.	BHE/PW/CP-01	RAISED CONCRETE PLATFORM
15.	BHE/PW/GATE	DETAILS OF GATE
16.	BHE/PW/01 OFFICE COMPLEX	PROPOSED LAYOUT OF BHEL PORTA-CABIN / BUNK HOUSE

These drawings are for tendering purpose. The work shall be executed with the approval of drawings by BHEL during execution.