



## **TENDER DOCUMENT**

**For**

**Detail Design, Preparation of Working Drawings, Dismantling,  
Supply of construction materials, Transportation, Fabrication,  
Erection, Construction, modification, Storage of Construction materials,  
etc... and all necessary Civil & Structural works required for complete  
Construction of the sub-station Buildings on Turnkey Contract basis  
for Coal Handling Plant (35 – 70 MTY) at Gevra OC Expansion Project**

**FOR**

**SOUTH EASTERN COALFIELDS LIMITED**

**AS PER SCOPE OF WORK SPECIFIED IN THE NIT DOCUMENT**

**AT**

**Gevra OCP, Gevra Area, Distt: Korba,  
Chhattisgarh - 495452**

**Tender No.- HEC/ PROJ/ CONTRACT CELL/ 2021/ Gevra-370, Date: 26.07.2021**



**HEAVY ENGINEERING CORPORATION LIMITED**

**PROJECT DIVISION**

**(A Government of India Enterprise)**

**RANCHI - 834 004**

**Ph.:0651-2401266**

**HEAVY ENGINEERING CORPORATION LIMITED****PROJECT DIVISION****Open Tender****Tender Enquiry No.: HEC/ PROJ/ CONTRACT CELL/ 2021/ Gevra/ 307,****Dated – 26/07/2021**

Dear Sir,

We request you to submit your most competitive offer for the following items as per the given schedule

SI No.	Description of Work	Unit of measure	Remarks
1.	Work of Detail Design, Preparation of Working Drawings, Dismantling, Supply of construction materials, Transportation, Fabrication, Erection, Construction, modification, Storage of Construction materials, etc and all necessary Civil & Structural works required for complete construction of the sub-station Buildings on Turnkey Contract basis for Coal Handling Plant (35 – 70 MTY) at Gevra OC Expansion Project, SECL	1 Lot.	As per TS of NIT
<b>ENQUIRY SCHEDULE</b>			
Schedule of tender receipt		As mentioned in CPP Portal.	
Schedule of tender opening		As mentioned in CPP Portal.	
Price Bid opening date		Will be intimated later	

Tender is available on our website in e-procurement section i.e. <https://etenders.gov.in/e procure/app> and in open tender section. Aspiring bidders may go through the tender document.

Bidders are required to upload the bid along with all supporting documents including priced part (BoQ) only on the e-tendering website (<https://etenders.gov.in/e procure/app>), on or before the due date and time for submission of bid.

**Tender Cost & EMD** to be uploaded in scan copy and hard copy to be sent sealed in separate envelop superscripted to our office at below mentioned address.

Thanking you,

(C S Prasad)

DGM/Purchase &amp; CC

Project Division,

Heavy Engineering Corporation Limited

HMBP ADM. BUILDING (ANNEXE) DHURWA,

RANCHI-834004

Ph.06512401266,

E-mail: [projectpurchase@hecltd.com](mailto:projectpurchase@hecltd.com)



**INSTRUCTIONS TO TENDERER (ITT)**

1.0 Prospective Tenderers are advised to get register themselves at NIC e-tender portal i.e. <https://etenders.gov.in/eprocure/app>, obtain 'User ID' & 'Password' and go through the 'Self Help files' available in the Home Page after log in to the portal <http://etenders.gov.in>. They should also obtain Class III Digital Signature Certificate (DSC) in parallel which is essentially required for submission of their application. Detailed instructions for online bid submission are attached in Annexure-3. No registration fee would be charged from the bidders.

2.0 NOTE: HEC reserves the right to extend/ change the schedule of any activity by intimating the bidders through a notification on the e-tender portal.

The Following two covers shall be submitted through online CPP - portal by the bidders. Last date and time of submission of bids (cover I, II) is as per given dates.

Cover – I: - Containing techno-commercial bid and containing Technical Performa (Enclosure-I)

- i. Scan copy of documents to be uploaded required as per Annex- 1 – Proof of Tender Fee submission document (DD/ BG/ NEFT/ RTGS), SSI/ NSIC/ MSME certificate (for exemption of tender fee) and other relevant documentary evidence (PO copy, performance certificate etc.)

Cover - II: Price Bid (BoQ)

The tenderer shall upload the digitally signed Schedule of price bid in the form of BOQ.xls

Bidders may please note, the schedule of quantities is attached in the portal. The same (BOQ) shall be downloaded and be filled in the editable (un protected) cells only and they should necessarily submit their financial bids in the format provided after entering the financial quotes, name of the bidder etc.

3.0 **Bid Opening Process is as below:-**

Cover-I: Technical bid opening date will be as per given dates. If any clarification is needed from the bidder about the deficiency in his uploaded documents in Cover-I, the bidder will be asked to provide it through Short fall documents folder in e-tendering portal. The bidder shall upload the requisite clarification / documents within time specified by HEC, failing which tender will be liable for rejection. Cover-II: The financial bids of the contractors / firms found to be meeting the qualifying requirements and technical criteria shall be intimated through portal. (Depending on Cover-I evaluation any changes in the date shall be intimated through e-tendering portal).

4.0 **Earnest Money Deposit** – The offers submitted shall be considered valid only when scan copy of EMD document. The scan copy of EMD document in form of DD/ BG have to be uploaded with the Techno-Commercial bid (Part 1) only.

Exemption of EMD shall be applicable on submission of valid SSI/ NSIC/ MSME certificate and as per prevailing govt. guidelines. SSI/ NSIC/ MSME Certificate to be uploaded in Techno Commercial Part 1. EMD detail as per the details mentioned below.

**The Bidder shall submit EMD of Rs 17,60,000.00 (Rupees Seventeen Lakhs Sixty thousand only) in the form of Bank Guarantee** (in prescribed enclosed Proforma at Annexure-4)/ Bank Draft in favour of Heavy Engineering Corporation Limited, Ranchi from a Nationalised Bank/ Scheduled Indian Bank.



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- a. The validity of the Bank Guarantee shall be for a period of 60 days beyond the validity of the Bid.
- b. Tenders not accompanied with EMD shall be liable for rejection

**The original EMD in form of DD/ BG should be reached us through courier or in person before the opening date of tender in following address**

To,  
DGM (I/c)/Purchase & Contract Cell  
PROJECT DIVISION  
HMBP ADM. BUILDING (ANNEXE)  
HEAVY ENGINEERING CORPORATION LIMITED  
DHURWA, RANCHI- 834004  
Fax. No. 0651-2401533  
Ph. No. 0651-2401266/ 2400562

**Refund of EMD:** The Earnest Money will be retained in the case of successful tenderer. The Earnest Money deposited by the successful bidder will be refunded on receipt of required Security Deposit from the bidder. EMD of the unsuccessful tenderers shall be refunded immediately after finalization of the tender. EMD shall be forfeited if any tenderer withdraw their offer before finalization of the tender.

**5.0 Tender Fee of Rs.10,000** (Rupees Ten thousand only) in the form of Demand Draft in favour of Heavy Engineering Corporation Ltd., payable at Ranchi. Tenders not accompanied with Tender Fee shall be liable for rejection.

Exemption of Tender Fee shall be applicable to bidders on submission of valid SSI/ NSIC/ MSME certificate and as per prevailing govt. guidelines. SSI/ NSIC/ MSME Certificate to be uploaded in Techno Commercial Part 1.

**6.0 PERIOD OF VALIDITY OF TENDER**

Unless otherwise specified, the Tenderer shall keep his tender valid initially for a period of 180 days from the date of opening of the tender.

**7.0 LANGUAGE**

The Tender shall be submitted in English language.

**8.0 NO CLAIM OR COMPENSATION FOR SUBMISSION OF TENDER**

The Tenderer who's Tender is not accepted shall not be entitled to claim any costs, charges, expenses of and incidental to or incurred by him through or in connection with his submission of Tenders, even though HEC Ltd may decide to withdraw the Invitation of Tender.



**9.0 INCOME TAX / SALES TAX CLEARANCE CERTIFICATE / PAN**

The Tenderer shall furnish the Income Tax Clearance Certificate, Sales Tax Clearance Certificate and copy of PAN with the tender duly countersigned by the respective officer under the seal of the office. Failure to produce the requisite certificate with tender, their quotation is liable to be rejected.

**10.0 CONFIDENTIALITY**

Tenderer shall note that all data/drawings/specifications enclosed with Tender document is confidential. Tenderer shall keep all data/drawings in strict confidence and shall not copy or pass on any of the Tender papers etc. to any third party. Tenderer shall return the Tender documents along with the Tender.

**11.0 NOTICES ON BEHALF OF HEC LTD**

Notice and Certificate on behalf of HEC LTD in connection with the Work Order may be given by duly authorised officers of HEC LTD. Any modification which may become necessary in the interim period will be intimated to you as soon as possible.

**12.0 PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS**

The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Purchaser's action.

**13.0 Tenderer to note that Work order will be awarded to L-1 firm on complete Turnkey package Basis.**

**14.0 Bill address And GST No. of HEC will be intimated later before issue of Work order.**

**15.0 One Bid Per Bidder:** Each Bidder shall submit only one Bid, either individually, or as a partner in a partnership firm or a partner in a joint venture or a public limited firm. A Bidder who submits or Participate in more than one Bid (other than a subcontractor or in cases of alternatives that have been Permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.

**16.0 Prices** shall not be indicated in this part and in case price is indicated in any form in techno- commercial (Part II) of offer the bid of Tenderer will be summarily rejected.

**17.0 Examination of Terms & Conditions- Technical Evaluation**

**Any bidder seeking benefit/preference under MSME / Make in India or any other policy/scheme of the Government of India, which is currently in force MUST at the time of bidding itself enclose all relevant documents / certificates etc. for claiming such benefits. The bidder must also clearly highlight the provisions of the policy and the kind of benefit being sought by it for which it meets the conditions for claiming such benefits. It may be noted that no other benefit / preference / concessions which is beyond the scope of the policy or the bidder's entitlement under the policy shall be given / considered by us.**



If the bidder fails to claim such benefit and/or fail to submit necessary documents/ certificates in support of its claim at the time of bidding itself, its claim shall not be entertained at a later stage in the bidding process and no opportunity shall be provided to it to submit any document / certificate.

**17.1 Evaluation and comparison of bids**

The bids shall be evaluated on the basis of final Package cost as per format given in BOQ of e-Tender:  
**For Goods manufactured within India**

i)	The price of the goods quoted Ex-works
ii)	GST which will be payable on the goods if the contract is awarded.
iii)	The charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination as specified in the BOQ.
iv)	The installation, commissioning and training charges including any incidental services, if any as given in Scope of Works of NIT
v)	Deviation to NIT payment terms.

The comparison between the offers shall be made on comparison of Package cost basis.

Price preference to Local suppliers as per Make in India procurement policy of Govt. of India and Department for Promotion of Industry and Internal Trade (DPIIT) order No. P-45021/2/2017-PP (BE-II) dated 04th June, 2020

**A. Eligibility of 'Class-I local supplier', 'Class-II local supplier' and 'Non-local supplier'**

- i. Only Class-I local suppliers are eligible to participate in tender if there is sufficient local capacity and local competition irrespective of the purchase value. L1 bidder amongst Class-I local suppliers shall be awarded contract subject meeting other requirements as per tender.
- ii. In procurement of all goods or services not covered above, only 'Class-I local supplier' and 'Class-II local supplier', shall be eligible to bid.

**B. Tendered goods are not divisible in nature, the following procedure shall be followed to evaluate L1 and award of contract:**

- a. Among all qualified bids, the lowest bid will be termed as L-1. If L-1 is from a Class-I local supplier, the contract will be awarded to L-1.
- b. If L-1 is not from a Class-I local supplier, the lowest bidder among the Class-I local suppliers, will be invited to match the L-1 price subject to local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such local supplier subject to matching the L-1 price.

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- c. In case such lowest eligible Class-I local supplier fails to match the L-1 price, the Class-I local supplier with the next higher bid within the margin of purchase preference shall be invited to match the L-1 price and so on and contract shall be awarded accordingly. In case none of the Class-I local suppliers within the margin of purchase preference matches the L-1 price, then the contract may be awarded to the L1 bidder.

**For more clarity in this regard, following table is furnished:**

Quantity of Tendered goods	Price quoted by Local suppliers	Finalization of tender
Cannot be Split	L1 is Class-I local supplier	Full Order on Class-I Local supplier
Cannot be Split	Not L1 but Class-I local supplier within L1+20%	Full Order on Class-I Local supplier subject to matching L1 price

Definitions of terms applicable to this clause

- ❖ 'Local content ' means the amount of value added in India which shall be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.
- ❖ 'Class-I Local supplier' means a supplier or service provider whose goods or services offered for procurement, has local content equal to or more than 50% .
- ❖ 'Class-II local supplier' means a supplier or service provider, whose goods or services offered for procurement, has local content equal to or more than 20% but less than 50%.
- ❖ 'Non-Local supplier' means a supplier or service provider, whose goods or services offered for procurement, has local content less than or equal to 20%.
- ❖ 'L1' means the lowest tender or lowest bid or the lowest quotation received in this tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.
- ❖ 'Margin of purchase preference' means the maximum extent to which the price quoted by a Class-I local supplier may be above the L1 for the purpose of purchase preference.

**C. Verification of local content**

- i. The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall be required to provide self certification that the item offered meets the minimum local content and shall give details of the location(s) at which the local value addition is made. (Annexure-5)



- ii. In cases of procurement for a value in excess of 10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
- iii. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Finance Rules along with such other actions as may be permissible under law.
- iv. A supplier who has been debarred by any procuring entity for violation of the order of the Department for Promotion of Industry and Internal Trade (DPIIT) order No. P-45021/2/2017- PP (BE-II) dated 04th June, 2020 shall not be eligible for preference under the said order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in the manner prescribed in the order of the Department for Promotion of Industry and Internal Trade (DPIIT) order No. P- 45021/2/2017-PP (BE-II) dated 04th June, 2020.

**D. “Class-II local supplier” will NOT get purchase preference in any procurement.**

**NOTE:**

**INSTRUCTION TO THE BIDDERS**

**“This procurement of goods/services under the reference Tender is covered under Public Procurement policy 2017, revised 16.09.2020 and here in after any further revisions.”**





**HEAVY ENGINEERING CORPORATION LIMITED**  
**PROJECT DIVISION**

Annexure – 1  
PART – I

Quotation No:.....

	<b>Requisite</b>		<b>Remark</b>
1	Submit the offer with signed and stamped commercial terms along with all Annexure and Technical specification enclosed with NIT.	Upload the relevant documents	
2	All NIT Items must be quoted otherwise offer shall not be considered as procurement is on <b>Package Basis</b> .	Yes/ No	
3	Whether SSI/ NSIC/ MSME	Yes / No (In case yes, then upload certificate)	
4	Tender fee (Rs. 10,000)/ EMD ( Rs. 17.60 Lakhs)	Yes/ No (In case yes, then upload scan copy of DD/ BG/ Online receipt )	
5	Class of the bidder (Class-I / Class-II/ Non-Local supplier) must be specified in line with procurement policy of Govt. of India and Department for Promotion of Industry and Internal Trade (DPIIT) order No. P-45021/2/2017-PP (BE-II) dated 04th June, 2020	Class-I/ Class-II/ Non-Local supplier	
6	Declaration of local content as per Annexure -5 (Mandatorily to be enclosed)	Enclosed/ Not Enclosed.	
7	F.O.R. Gevra OCP, SECL Site	Yes/ No	
8	Validity (One hundred and Eighty (180) days from the date of opening of the techno-commercial part )	Yes/ No	
9	Whether Terms & Condition/ Note etc. mentioned in the tender enquiry is acceptable to the tenderer	Yes/ No	
10	Acceptance of Time Schedule of NIT	Yes/ No	
11	Acceptance of Payment terms of NIT	Yes/ No	
12	Acceptance of LD Clause of NIT	Yes/ No	
13	Submission of Security and Performance Bank Guarantee.	Yes/ No	
14	Acceptance of Guarantee Clause of NIT	Yes/ No	
15	Acceptance of Force Majeure as per NIT	Yes/ No	
16	Acceptance of Legality and Dispute clause as per NIT	Yes/ No	

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17	Submission of No-Deviation certificate against all commercial clauses of NIT	Yes/ No	
18	Inspection	Yes/ No	
19	Integrity Pact as per Annexure-8 ( <b>Without submission of Integrity Pact the bid shall not be considered for further evaluation</b> )	Yes/ No	
20	GCC of HEC to be Accepted	Yes/ No	

(Signature of Tenderer with seal)



**PART-II (Price Bid)**

1. The tenderer shall upload the digitally signed Schedule of price bid in the form of BOQ.xls
2. Bidders may please note, the schedule of quantities is attached in the portal. The same (BOQ) shall be downloaded and to be filled in the editable (un protected) cells only and they should necessarily submit their financial bids in the format provided after entering the financial quotes, name of the bidder etc.
3. Bidders to note that the price as per the offer is strictly to be mentioned under Part-II of Price bid and not to be disclosed in any manner under techno-commercial bid Part-I, In case price of the bidder is disclosed under techno-commercial bid Part-I, the offer of the firm will be summarily rejected.



**Instructions for Online Bid Submission**

*The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.*

*More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.*

**REGISTRATION**

- (i) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://etenders.gov.in/eprocure/app>) by clicking on the link “Online bidder Enrollment” on the CPP Portal which is free of charge.
- (ii) In case of any clarification please contact M/s NIC, before the schedule time of the submission of bid. Contact Person:- **Shri Kushal Kumar: 09852923855/ 7903884318**
- (iii) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- (iv) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- (v) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- (vi) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to *ensure that they do not lend their DSC's to others which may lead to misuse.*
- (vii) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

**SEARCHING FOR TENDER DOCUMENTS**

- i) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- ii) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- iii) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.



## PREPARATION OF BIDS

- i) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- ii) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents incl. the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- iii) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/ schedule and generally, they can be in PDF/ XLS/ RAR formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- iv) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

**Note:** My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

## SUBMISSION OF BIDS

- i) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- ii) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- iii) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument.
- iv) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by as specified in the tender documents. The details of the DD / any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- v) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.



- vi) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- vii) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- viii) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- ix) Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- x) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

#### ASSISTANCE TO BIDDERS

Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 **CPP Portal** Helpdesk.

Note: For any query related to registration and processing on the Portal please visit FAQ available at <https://etenders.gov.in/e procure/app?page=FAQFrontEnd&service=page>

You may call the Helpdesk. The 24 x 7 Help Desk Numbers are  
0120-4200462, 0120-4001002, 0120-4001005, 0120-6277787

E-Mail: [support-eproc@nic.in](mailto:support-eproc@nic.in)

**Or**

You may call to our service provider: 06512400562,06512401266

E-Mail: : [projectpurchase@hecltd.com](mailto:projectpurchase@hecltd.com)



**HEAVY ENGINEERING CORPORATION LIMITED**  
**PROJECT DIVISION**

**Annexure 4**

**BANK GUARANTEE PROFORMA FOR**  
**EARNEST MONEY DEPOSIT**

*(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)*

*(TO BE ISSUED BY ANY NATIONALISED/SCHEDULED BANK*

*AUTHORISED BY RBI TO ISSUE A BANK GUARANTEE)*

To:

Heavy Engineering Corporation Limited

Ranchi-834004

WHEREAS \_\_\_\_\_ *[name and address of Tenderer]* (hereinafter called "the Tenderer")

shall be submitting its Tender dated \_\_\_\_\_ *[date of the Tender]* for the work. \_\_\_\_\_ *[name of the work]* (hereinafter called "the Tender").

KNOW ALL MEN by these present that we, \_\_\_\_\_ *[name of the bank]* of \_\_\_\_\_

*[name of the country]* \_\_\_\_\_ having our registered office at \_\_\_\_\_ *[address of the bank]*

(hereinafter called "the bank"), are bound unto the Heavy Engineering Corporation Limited, P.O. Dhurwa, Dist. Ranchi (Jharkhand) (hereinafter called "the Purchaser") for the sum of *[amount of the Guarantee in words and figures]* for which payment well and truly to be made to the said Purchaser the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said bank this \_\_\_\_\_ day of \_\_\_\_\_ 200\_.

THE CONDITION of this obligation are :

1. If the Tenderer withdraws its Tender during the period of Tender Validity specified by the Purchaser on the Tender form ; or
2. If the Tenderer withdraws having been notified of the acceptance of its Tender by the Purchaser during the period of Tender Validity :
  - (a) Fails or refuses to execute the Contract Agreement when required ; or
  - (b) Fails or refuses to furnish the Security-cum-Performance Guarantee Security (if any) in accordance with the Tender conditions.

We, \_\_\_\_\_ *[name of the bank]* undertake to pay to the Employer up to the above amount upon receipt of its first written demand, without the Employer having to substantiate its demand, provided that in its demand the Employer will note that the amount claimed by it is due to it owing the occurrence of 1 or both of the 2 (a) or (b) specifying the occurred condition or conditions.

This guarantee will remain in full force up to and including the date \_\_\_\_\_ and any demand in respect thereof should reach the Bank not later than the date of expiry of this guarantee.

For and on behalf of the Bank.

Signature

Name

Designation

Common Seal of Bank



**LOCAL CONTENT DECLARATION**

**Date:**

To,

M/s HEC Ltd ,  
Plant Plaza Road  
Ranchi-834004

**Sub:** Certificate as per clause 9 (a) of Revised Public Procurement (Preference to Make in India Order, 2017 of DPIIT dated 04/06/2020 and 16/09/2020.

**Ref:** HEC/ PROJ/ CONTRACT CELL/ 2021/

I (authorized signatory for M/s ..... ) declare the local content for the complete scope of work of the tender with their location details in the below mentioned table:

Sl. No.	For Complete Scope of NIT & TS	Local Content (in %)	Location details at which local value addition is made (Factory address)
1			

We also certify that the above details are true & correct and if found to be false then it shall be a breach of the Code of Integrity and our bid will be liable to be rejected and we will have no objection against rejection of bid.

For M/s .....

Authorized Signatory  
(with company seal & Name)

**Note :**

1. In case the value of offer (Excluding Taxes) is more than 10 Crores INR , the above declaration will be required to be certified by Practicing CA with MRN & FRN of CA.
2. The Local Content Declaration must be submitted by the bidder during submission of offer along with Techno-commercial Bid. No change in Local Content of declaration will be allowed once the bid is submitted.





**FORMS OF TENDER**

Sub: TENDER for the Work \_\_\_\_\_

To,

\_\_\_\_\_  
\_\_\_\_\_

Dear Sir,

We offer to execute the Works/ Supply/ Services described above in accordance with the Conditions of Contract accompanying the Tender Document issued to us.

This tender and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any tender you received.

We hereby confirm that this tender complies with the tender validity and tender security required by the tender documents.

Yours faithfully

Authorised Signature :

Name and Title of the Signatory :

Name of Tenderer :

Address :

Date :

(To be filled by the tenderer )



**COMMERCIAL TERMS AND CONDITIONS**

**1. Scope of Work:**

The scope of work shall include Detail Design, Preparation of Working Drawings, Dismantling, Supply of construction materials, Transportation, Fabrication, Erection, Construction, modification, Storage of Construction materials, etc and all necessary Civil & Structural works required for complete construction of the Sub-station Buildings on Turnkey Contract basis for Coal Handling Plant (35 – 70 MTY) at Gevra OC Expansion Project, SECL.

**Site Visit:** Gevra Open Cast Expansion project of Gevra area forms south central part of Korba coalfields. The project is located in the Korba district of Chhattisgarh State. The proposed silos for supply of coal to various consumers through railways will be located near Gevra Road station of SECR and will be connected to the proposed East-West (Gevra Road – Pendra Road) rail corridor. The site is situated at 6 km and 12 km from Gevra Road and Korba Railway Stations respectively and 90 km by road from Bilaspur.

2. The document to be uploaded in two bid system with Tender fee, EMD, Techno-commercial along with the qualifying document for carrying out similar works to be uploaded as Part-I, with the Price bid of works to be executed shall be uploaded in BOQ in xls. file as per instruction in ITT; which will be evaluated independently of technically suitable bidder. However, the hard copy of Tender fee and EMD to be submitted at our office address only.

**3. TIME SCHEDULE**

Time allowed for completion of the total Work as per TS of NIT is 12 months from the date of issuance of Work Order. Date of commencement shall be after 7 days from issuance of Work Order or handing over of the site whichever is later.

**4. Tender Fee**

- a) **Tender Fee amount Rs. 10,000 (Rupees Ten Thousand Only)**
- b) Tender Fee is to be paid through Demand Draft in favour of “**Heavy Engineering Corporation limited**” payable at “**State Bank of India, Hatia**”.

**5. Earnest Money Deposit**

- a) **EMD amount Rs. 17,60,000.00 (Rupees Seventeen Lakhs Sixty Thousand only)**
- b) **Payable through Demand Draft/ Bank Guarantee.** DD in favor of “**Heavy Engineering Corporation Ltd**” **Payable at “State Bank of India, Hatia**”. In case EMD is considered to be uploaded in the form of BG, the same shall be valid for minimum 8 months from the date of opening of the tender.
- c) Earnest Money/ Bid Security of the unsuccessful bidders shall be refundable as promptly as possible after opening of Price Bid and finalization of tender and shall bear no interest.
- d) For the successful tenderer, the Earnest Money will be converted to Security Deposit.
- e) No interest will be payable on Earnest Money and Security Deposit.



- f) Exemption from deposit of Earnest Money and Tender fee for SSI/ MSME/ NSIC or any other category will be guided as per prevailing Government guidelines on production of documentary evidence in its support of it.

#### **6. Security Deposit-**

- a) On acceptance of the Tender, Security Deposit will be applicable as per Clause No-18 mentioned below wherein the Successful Tenderer shall furnish a Security Deposit in any of the forms Demand Draft/ Bank Guarantee. DD in favour of “Heavy Engineering Corporation Ltd” Payable at “State Bank of India, Hatia. If it is submitted in the form of a Bank Guarantee, the same shall be from any of the Nationalised Banks or Scheduled Banks in Ranchi and enforceable at Ranchi. The proforma for the BG is attached at Appendix-1.

The Bank Guarantee for Security Deposit shall be for the due and faithful performance of the Contract and shall remain binding notwithstanding such variations, alterations or extensions of time as may be made, given, conceded or agreed to between the Contractor and the Employer.

The Bank Guarantee for Security Deposit shall remain in full force and effect during the period of the Contract and shall continue to be valid up-to 30 days after the expiry of the Guarantee period. The Bank Guarantee shall provide for extension of validity on demand by the Employer. Such extension of validity shall be confirmed by the guarantor bank without any reference to the Contractor.

- b) In case of non submission of Security and Performance Bank Guarantee, the Earnest Money of the successful bidder will be converted to Performance Guarantee, and the remaining amount shall be collected by deduction from running bills of the contractor in a proportionate manner from each RA bill subject to a maximum of 10% of the contract value.
- c) The Security and Performance Bank Guarantee shall be refunded **after 12 months** from the date of receipt of Completion certificate from HEC issued by I/c C&S Dept. or I/c Gevra Project.
- d) In the event of non-execution of the Work Order or withdrawal before expiry of validity period, the EMD/ SD will be forfeited.

#### **7. Mandatory Requirements**

Documents which are not covered under Annexure-1 of INSTRUCTION TO TENDRER are mentioned here shall also be uploaded- .

- a) Experience of similar work executed during the last Ten years. Details with value, name of the client etc. are to be mentioned enclosing documentary evidences. Completion certificate is mandatory.
- b) Documentary evidence of adequate financial standing duly certified by Bank.
- c) Labor License and other details of General Condition of Contract.
- d) PAN No.
- e) Constitution and legal status of the tenderer (individual, partnership, co-operative, registered firm etc.), existence of joint ventures or other form of tie up for technology, equipment, financial backing and/ or project management etc. to clearly mention with copy of supporting documents along with the offer.



- f) Financial standing-Documents to be enclosed with the quotation should be certified by bank, audited profit & loss account, Balance sheet, annual turn-over, access to adequate working capital.
- g) Group Insurance
- h) Details of necessary construction equipment / facilities for the job under this tender to be deployed for the project and proof of its availability, equipment proposed to be purchased or hired are to be attached with this offer.
- i) Availability of key personnel for supervision and management of the work indicated.
- j) Information regarding project in hand, current litigation, orders regarding execution/expulsion or black listing if any to be furnished.
- k) The bidders would give a declaration that they have not been banned or delisted by any Government or Quasi Govt. agencies or PSU's. If a bidder has been banned by any Government or Quasi Govt. agencies or PSU's that must be clearly stated and it may not necessarily be a cause for qualifying him. If this declaration is not given, the bid will be rejected as non responsive.
- l) Signed copy of Integrity Pact (Appendix 8) and Affidavit (Appendix 9) as per format enclosed at the end of NIT.

**8. Qualifying Criteria:**

**A. TECHNICAL QUALIFYING CRITERIA -**

- a) Work related to "Execution of **Detailed Design, Preparation of Working Drawings, Supply, Transportation, Storage of Construction materials, Construction, Fabrication, Erection, modification etc and all necessary Civil & Structural works on Turnkey basis for Bulk Material Handling System/ Coal Handling Plant** for last Ten years ending last day of month previous to one in which bid application are invited should be either of the following:-

- 1. **Three similar** completed Works/ Project each costing not less than **Rs 6.04 Cr. (Rupees Six Crore and Four Lakhs only).**

Or

**Two similar** completed Works/ Project each costing not less than **Rs 7.55 Cr. (Rupees Seven Crore & Fifty Five Lakhs only).**

Or

**One similar** completed Work/ Project each costing not less than **Rs. 12.07 Cr. (Rupees Twelve Crores and Seven Lakhs only).**

The definition of similar works/ Projects shall be **Design, Preparation of Working Drawings, Supply, Construction, Fabrication and Erection of all necessary Civil & Structural works of any of the following systems:**

Integrated Coal Handling Plant (CHP) or any other bulk material handling system with Conveyor system.



## HEAVY ENGINEERING CORPORATION LIMITED

### PROJECT DIVISION

Or,

Rapid Loading System (RLS) or Unit Train Loading System (UTLS) with Conveyor system.

Or,

Work identical in name and nature of the tendered Work for any other Projects comprising Design & Execution of Civil & Structural Works.

The intending tenderer must submit documentary evidence in support of above in the form of:

- (i) Certified copy of work orders as per above scope of Work/ Project.
- (ii) Completion certificate indicating value and period of work/project, The TDS certificate be submitted during clarification, if any. **Completion certificate with respect to Work Order Value will only be acceptable.**
- (iii) Documents to be submitted for work executed in India only with valid completion certificate from customer however work executed outside India to be submitted with duly certified through authorized office of Govt. of India. The experience towards overseas jobs, if submitted, should be vetted/ endorsed by the relevant\* embassy/ High commission concerned, towards authenticity of document in English or translated in English language. (\*Relevant embassy/ High Commission means the embassy/ High Commission in India of the country where the bidder has executed the said work or country of origin of the bidder OR the Indian embassy in the country where bidder has executed the work or country of origin of the bidder.)

#### **FINANCIAL QUALIFYING CRITERIA**

##### **Annual Turn-Over**

**Average annual financial turnover during last 3 years, ending 31<sup>st</sup> March of previous financial year should not be less than Rs 4.53 Cr (Rupees Four Crore & Fifty Three Lakhs Only).** In this regard, Audited Profit & loss account, Balance sheet have to be furnished. On account of Covid-19 Pandemic in case the bidder is unable to submit, Audited Profit & Loss account and Balance sheet for FY 20-21, then evaluation of Average Turn-over will be done based on Average Turn Over for Last three Years previous to FY 2020-21.

##### **Working Capital:**

**The bidder must produce the evidence of adequacy of a minimum working capital of Rs 3.02 Cr (Rupees Three Crore and Two Lakhs Only) of the work.**

Banker's Certificate (Scheduled Bank) shall be produced regarding availability of access to credit (issued within 3 (Three) months prior to date of submission of Bid) to meet the above Qualifying criteria.



9. Even though an applicant may satisfy the above requirements, he would be liable to disqualification if he has;
- Made misleading or false representation or deliberately suppressed the information in the form of statements and enclosures required for qualifying document.
  - Record of poor performance such as abandoning work, not properly completing the contract or financial failures/ weakness etc.

10. After evaluation of techno-commercial (Part-I), for the technically qualified bidder the opening of the price bid (Part-2) will be made online. The price-bid of unqualified bidder will remain unopened.

**11. Price-Bid**

The tenderer shall upload the digitally signed Schedule of price bid in the form of BOQ.xls. The same (BOQ) shall be downloaded and be filled in the editable (un protected) cells only and they should necessarily submit their financial bids in the format provided after entering the financial quotes, name of the bidder etc. The price shall remain firm during entire period of contract.

**The L-1 Bidder will be decided based on Package Basis.**

**12. Validity of Offer**

Offers should be valid for 180 days from the date of opening of Techno-commercial offer.

**13. ONE BID PER BIDDER**

Each Bidder shall submit only one Bid, either individually, or as a partner in a partnership firm or a partner in a joint venture or a public limited firm. A Bidder who submits or Participate in more than one Bid (other than a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Bidder's participation to be disqualified.

**14. Responsibility of Contractor**

- The contractor will have the obligation to pay the wage/ salary to various categories of its workers/ employee as per latest State Government's minimum wage circular.
- Contractor also will have to pay PF to all categories of workers/ employee employed by him as per prevailing rules.
- The contractor is to provide all required safety measure for safe working environment and supply all safety appliances to the workers as per the nature of work and directive of executing agency.
- The workers engaged should be covered under **Group Insurance Scheme**.
- The contractor should have valid labor license for engagement of labourer at work site and a copy of the same to be submitted along with the contract.
- The contractor to adopt such process/ method of work that generates minimum environmental pollution.



### **15. Inspection**

Inspection needs to be made strictly as per Technical specification of NIT. The successful bidder will raise the Inspection call based on readiness of supply/ work as per scope of NIT/ TS to the Site I/C, Gevra. Accordingly, Site I/C, Gevra will carry out the Inspection of completion of supply/ work and issue the Inspection certificate for raising bills against supply/ work by the successful bidder.

### **16. Payment Terms and Conditions**

#### Design and Engineering

- a) 95% payment on completion of approval of system, structural design, drawings etc. as per contract on pro- rata basis certified by Design Department.
- b) 5% on issue of completion certificate of the works duly certified by Site I/C, Gevra as per NIT and Technical Specifications.

#### Civil and Structural Supply and Works

- a) 95% payment on progress of work completed, duly measured and certified by the Site I/C/ Gevra.
- b) 5 % on issue of completion certificate of the works duly certified by Site I/C, Gevra as per NIT and Technical Specifications.

#### Note:

1. The supply should commensurate with mutually agreed BAR/ PERT chart
2. The Successful Bidder will submit the detailed Billing Schedule as per Scope of work of NIT/ TS within 15 days after award of Contract.
3. The Documents required for Civil & Structural Supply and Works to be submitted for 95% payment are- GST Invoice, GSTR1, Wage sheet, submission of PF & ESI, Proof of payment made to workers, Measurement sheet duly certified by Site In-Charge / Engineer/ Design department and other documents as applicable.
4. If at any stage during Contract execution, till final settlement and closure of Contract, it is found that some excess/ over payment has been made to Contractors, the same shall be recovered forthwith by HEC from the subsequent bills or any amount of the Contractor that may be remaining with HEC and in that event, such excess amount, which is more than the amount due to HEC, the Contractor shall be liable to pay this amount separately.

### **17. Paying Authority:**

DGM I/c Finance  
Finance Department, Project Division  
HMBP ADMIN Building, HEC Limited,  
Ranchi- 834004

**The R. A. bill to be submitted (in Triplicate) with proper documentation.**



**18. Contract Performance Guarantee/ Security Deposit:**

**18.1 Security Deposit** shall consist of two parts:

- a) Performance Security for 5% of Contract amount to be submitted at award of work and
- b) Retention Money for 5% of Contract amount to be recovered from running bills. The security deposit shall bear no interest.

18.1.1 Performance Security should be 5% of contract amount and should be submitted by the successful bidder within 10 days of issue of LOA/Work Order in the form of Bank Guarantee given in the bid document from any schedule bank acceptable to the owner. The Earnest Money/ Bid Security deposited may be adjusted against the Performance security at bidder's Option.

18.1.2 If performance security is provided by the successful bidder in the form of bank guarantee it shall be issued either -

- (a) At Bidder's option by a Scheduled Bank as per provisions of cl. 18. above. The BG shall contain complete postal address, telephone number, fax number and email address of both out station bank issuing the BG as well as its local operating branch.

18.1.3 Retention Money should be deducted at 5% from running bills. Total of performance security and Retention Money should not exceed 10% of contract amount or lesser sum indicated in the bid document. Retention Money may be released against equivalent Bank Guarantee.

**18.2** The Guarantee amount shall be payable to the Employer without any condition whatsoever.

**18.3** Performance Security/ Retention Money shall be converted into Performance Guarantee on successful completion of work in accordance with contract Performance security/ Retention Money/ security deposit submitted in the form of BG which shall be valid for 90 days after the end date of scheduled completion and to be extended for minimum period of 1(one) year in one instance which must cover the time period of 90 days beyond completion of 12 calendar month from completion of work as per TS of NIT.

**18.4** The Company shall be at liberty to deduct/appropriate from the Contract Performance Guarantee/Security Deposit such sums as are due and payable by the contractor to the company as may be determined in terms of the contract, and the amount appropriated from the Contract Performance Guarantee/Security Deposit shall have to be restored by Contractor subsequently.

**18.5** Performance Security deposit shall be returned to the Contractor after successful completion of 12 calendar months from completion of work as per TS of NIT without any interest after certification from Site I/c Gevra against no defect. The balance SD i.e. Retention Money shall be released without any interest after successful completion of entire period of the 12 calendar month from completion of work as per TS of NIT. Any defect/defects in the work, if detected during 12 calendar month from completion of work as per TS of NIT shall be rectified and shall be replaced to the satisfaction of the Engineer/ Site In-charge.





**19. Arbitration**

- a) All Disputes or differences, whatsoever, arising between the parties out of or in relation to the construction, meaning and operation or effect of this Contract or breach there of shall be settled amicably. If, however, the parties are not able to resolve them amicably, the same shall be settled by arbitration in accordance with the Rules of Arbitration of the Indian Council of Arbitration as per the provision of Arbitration Conciliation Act 1996 and the award made in pursuance there of shall be binding on the parties. The Arbitrator/ Arbitrators will give reasoned award.
- b) Work under the contract shall continued by the Bidders during arbitration proceeding unless otherwise directed in writing by HEC or unless the matter is such that work cannot be continued until decision of the arbitrators or of the judiciary, as the case may be, is obtained and save as those which are otherwise expressly provided in the contract, no payment due or payable by the purchaser shall be withheld on arbitration proceeding unless it is the subject matter or on the subject matter thereof.
- c) The Venue of arbitration shall be Ranchi, Jharkhand.

**20. No Claim or Compensation for Submission of Tender**

The Tenderer whose offer is not accepted shall not be entitled to claim any costs, charges, expenses or an incidental to or incurred by him through or in connection with his submission of Tendered, even though HEC Ltd may decide to withdraw the invitation of Tender. NO PRICE ESCALATION will be considered for successful tenderer till completion of the project.

**21. Liquidated Damages**

If the contractor fails to complete the work in time during the contract period or any part thereof, the recovery equivalent required to one half percent (0.5 %) of the contract price per week or part thereof for the period of delays subject to a maximum of 10 % of the contract price shall be charged without prejudice to any HEC's right and other provisions of the contract.

**22. Risk And Cost Measure**

At any time, if the progress of work is not found satisfactory, H.E.C. shall have the right either to withdraw the balance work or part thereof and shall get the same done at Contractor's risk and cost after giving an advance notice of 7 days to the contractor. In such a situation no compensation whatever shall be payable to the contractor. The security deposit whatsoever deducted would be adjusted against the excess cost incurred over the balance contract value.

**23. Force Majeure**

Time being the essence of the contract, if either party is prevented from the Performance of its obligations in whole or in part for reasons of Force Majeure, viz acts of God, acts of Government, acts of Public enemy, pandemic, war, hostility, civil commotion, sabotage, fire, flood, explosion, strike, and lawful lockout, then provided notice of happening of any such eventuality is given by the effected party to the other party immediately & maximum within 15 days from the date of occurrence and cessation of the force majeure, the



period of Force Majeure shall be excluded accordingly. If the Force Majeure event(s) continue beyond the period of 3 months, the parties shall hold consultation to chalk out the further course of action. Neither party can claim any compensation from other party on account of Force Majeure.

**24. Guarantee Clause And Guarantee Period:**

24.1 The Contractor shall be liable for a period of twelve (12) calendar months of reliable and regular working of the Plant commencing from the date of issue of Completion certificate issued by I/c C&S or I/c Gevra Project to rectify failure of any parts or show signs of defects which is related to faulty material/ drawing.

24.2 All such rectifications of material/ drawing mentioned above shall be made free of cost at contractor's expenses.

**25. Confidentiality & Secrecy**

All drawings/ documents & information exchanged between the parties shall be treated as confidential and shall be used within permitted entities to only those persons who need to make use of it for purpose of project execution.

**26. Jurisdiction of Court/ Legality and Dispute**

The contract shall be governed and interpreted in accordance with the laws in force in India. The Hon'ble Jharkhand High Court of Ranchi shall have the exclusive jurisdiction over all matters of disputes.

**27. General Condition of Contract**

Tenderer shall abide by the General condition of contract of Heavy Engineering Corporation Ltd. Ranchi, a copy of GCC of Work contract can be downloaded from the website [www.hecltd.com](http://www.hecltd.com) for reference.



**HEAVY ENGINEERING CORPORATION LIMITED**  
**PROJECT DIVISION**

**ENCLOSURE (Check List)**

**The following documents are mandatory to be submitted along with tabulating details with page number (in one page) along with techno-commercial bid**

Tender Fee/ Valid exemption certificate
Copy of EMD Draft/ Bank Guarantee (Original in separate sealed envelope)
NIT signed copy
Power of Attorney
No Deviation Certificate on Letter Head of the Company ( Appendix 6A & 6B)
Affidavit of bidder ( Appendix 9)
Evidence of access to financial resources to meet the qualification requirements
Details of the major construction equipment to be used for the work ( Appendix 4)
Full details of plant and maintenance facilities together with the details of laboratory personnel, workshop personnel including fitters, mechanics, machinists etc. ( Appendix 4)
Copies of original documents, defining the constitution or legal status, place of registration and principal place of business
Details of experience for similar nature and complexity of work executed in last 10 years with performance certificate of the same work. (to qualify as per commercial terms and condition)
Financial reports of last three years : Balance sheet, Profit and loss statement, auditor's report, etc.
Integrity pact with HEC strictly on non-judicial stamp paper of Rs. 100/- duly signed and stamped (Appendix 8)
Information about litigation, if any, in which bidder is involved(Current or during last five years)
Declaration by the bidder regarding non- banning or delisting by other Govt./quasi-Govt. agencies or PSU
Copy of GST Registration
Permanent Income Tax account Number (PAN)
Copy of Registration with PF authorities
Organization chart showing personnel capabilities
Details of Bankers; Information on Bid capacity
Time Schedule ( Appendix 5)
Local Content Certificate duly certified by CA



**ON-LINE PRICE BID-BOQ ( FOR REFERENCE ONLY)**

Sl.No.	Name of the work	Unit	Grand Total Basic Quoted Package Price in Rupees (exclusive of GST)
I	Work of Detail Design, Preparation of Working Drawings, Dismantling, Supply of construction materials, Transportation, Fabrication, Erection, Construction, modification, Storage of Construction materials, etc and all necessary Civil & Structural works required for complete construction of the sub-station Buildings on Turnkey Contract basis for Coal Handling Plant (35 – 70 MTY) at Gevra OC <b>Expansion Project, SECL</b>	1 Lot	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  <b>(NOT TO BE QUOTED)</b>
II	GST ( in Rupees )  Rate - % (GST rate to be indicated in percentage)		
III	Total Package Price inclusive of GST ( in Rupees )		

**NOTE:**

- 1. The L-1 will be decided based on Package/ Turnkey price only.**
- 2. The Price is strictly to be quoted in the BOQ.xls and not to be mentioned anywhere in the Techno-Commercial Bid. In case any Price Indication is found in the Techno-Commercial Bid (other than BOQ.xls), the Tendered offer of the bidder will be summarily rejected.**



**HEAVY ENGINEERING CORPORATION LIMITED**  
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**Appendix -1**

**BANK GUARANTEE PROFORMA FOR PERFORMANCE SECURITY/GUARANTEE**

*(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)*

*(TO BE ISSUED BY ANY NATIONALISED/ SCHEDULED BANK*

*AUTHORISED BY RBI TO ISSUE A BANK GUARANTEE)*

To:

Heavy Engineering Corporation Limited, P.O. : Dhurwa,  
Dist. : Ranchi (Jharkhand)

In consideration of the Heavy Engineering Corporation Limited, having its Registered office at P.O. Dhurwa, Dist. Ranchi (Jharkhand) (hereinafter called to as the "Employer" which expression shall unless repugnant to the context or meaning thereof, include all successors, administrators and assigns) having awarded to *[Name & Address of the Contractor]* (hereinafter called to as "Contractor" which expression shall unless repugnant to the context of meaning thereof include its successors, administrators, executors and assigns) the work \_\_\_\_\_ *[Name of the Work]* by issue of Letter of Award No.

\_\_\_\_\_ *[Work Order/Letter of Intent No.]* and the same having been unequivocally accepted by the Contractor resulting into a Contract Agreement dated valued at \_\_\_\_\_ *[value of Work Order]* (hereinafter called 'the Contract') and the Employer having agreed to accept Performance Bank Guarantee of \_\_\_\_\_ *[indicate figure]*% of

the Contract Sum \_\_\_\_\_ *[amount in figures and words]* from a

Nationalized/Scheduled Bank for due performance of the work executed by the Contractor as per the terms & conditions contained in the said Contract.

We, \_\_\_\_\_ *[name of the Bank]*, of \_\_\_\_\_ *[address of the Bank]* (hereinafter called to as "Bank" which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Employer immediately on demand and or, all money payable by the Contractor to the extent of \_\_\_\_\_ *[amount of*

*guarantee in figures and words ]*, at any time from \_\_\_\_\_ to \_\_\_\_\_ without any demur, reservation, recourse, contest or protest and/or without any reference to the Contractor. Any such demand made by the Employer on the Bank shall be conclusive and binding notwithstanding any difference between the Employer and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. We agree that the Guarantee herein contained shall be irrecoverable and shall continue to be enforceable as per the terms & conditions contained in the said Contract.



<b>HEAVY ENGINEERING CORPORATION LIMITED</b>
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The Employer shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time, to extend the validity of time of Performance of the Contract by the Contractor. The Employer shall have the fullest liberty without affecting this Guarantee, to postpone, from time to time, the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forebear or to enforce any covenants contained or implied in the Contract, between the Employer and the Contractor or any other course or remedy or security available to the Employer. The Bank shall not be released of its obligations under these presents by any exercise by the Employer of its liberty with reference to matter aforesaid or any of them or by reason of any other act of forbearance or other acts of omission or commission on the part of the Employer or any other indulgence shown by the Employer or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving the Bank. The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a Principal Debtor in first instance, without proceeding against the Contractor and notwithstanding any security or other Guarantee that the Employer may have in relation to the Contractor's liabilities.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ at \_\_\_\_\_

For and on behalf of the Bank.

Signature Name \_\_\_\_\_

Designation

Common Seal of Bank \_\_\_\_\_



<b>HEAVY ENGINEERING CORPORATION LIMITED</b>
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Appendix-2

**UNDERTAKING TO BE SUBMITTED BY TENDERERS WHO DOES NOT POSSESS AN INDEPENDENT PROVIDENT FUND CODE NUMBER, ISSUED BY THE EMPLOYEES' PROVIDENT FUND ORGANISATION, GOVT. OF INDIA, IN THEIR NAME**

Name of the Work :

Tender Notice No. & Date :

To, .....

Heavy Engineering Corporation Limited

Ranchi-4 , Jharkhand

INDIA

We hereby confirm that in the event of our becoming L-1 in the subject tender and in the event of this work being awarded to us, we will obtain an independent Provident Fund Code Number, issued by the Employees' Provident Fund Organisation, Govt. of India, in our name, before start of work. We understand that we are required to abide by and comply with all the rules & regulations pertaining to and in connection with the Employees' Provident fund & Miscellaneous Provisions act 1952 (EPF & MP Act 1952) and hereby confirm that we shall do so in all respects.

Signature of tenderer

APPENDIX-3

**HEAVY ENGINEERING CORPORATION LIMITED****PROJECT DIVISION**

Details of jobs undertaken (On-hand &amp; Completed)

Sl No.	Full Particulars of similar work carried out by the Tenderer	Amount of work	Completion time as stated in tender	Actual completion time and year of execution	Name & complete postal address of authorities for whom work was carried out with Telephone no., Mobile No., Email and Fax. No. if Any

A. Work executed in the Name of Tenderer:

B. Work executed by tenderer not in the name of the Tenderer but in a different name or in a different partnership or as subcontractor to a principal Contractor.

- NB: 1. A separate sheet may, if required, be used for giving the details in the proforma mentioned above. The sheet shall be duly signed and stitched to the tender.
2. Completion Certificate to be enclosed.





Schedule of Constructional plant and Equipment required for Construction, Execution. Completion and Maintenance works with details of each to be employed by the Tenderer for the contract.

Sl. No	Description	Details	Approximate date when it will be employed at site	Period of retention at site

NB: A separate sheet may, if required, be used for giving the details in the proforma mentioned above. The sheet shall be duly signed and stitched to the tender.



**TIME SCHEDULE**

<b>S. No.</b>	<b>Items of Work</b>	<b>As per HEC Time Line</b>	<b>Bidder's Schedule</b>
1.	Detailed Design Engineering for entire Scope of Work of TS and NIT	Within 1 month from date of award of contract	
2.	Supply and Erection of Civil & Structural Works as per entire scope of Work of TS and NIT	Within 12 months from date of award of contract	



**FORM FOR DEVIATIONS FROM THE TENDER DOCUMENT**

We have examined the Tender Documents and understood all the requirements. We hereby confirm that the Scope of Work and other details of our offer conform to Tender Specifications No. \_\_\_\_\_ excepting for deviations listed below.

We understand that Employer/Employer’s representative will not entertain any deviations other than those specified below and accepted by Employer/ Employer’s representative in writing:

Refer Clause no. of Tender Specifications	Deviations	Justification for the deviation

Name of the Work.....

Specification No.....

Signature: .....

Name: .....

Designation: .....

Tenderer’s seal with date:



**FORM FOR DEVIATIONS FROM THE TENDER DOCUMENT**

We have examined the Tender Documents and understood all the requirements. We hereby confirm that the Scope of Work and other details of our offer conform to Tender Specifications No. \_\_\_\_\_ excepting for commercial deviations listed below.

We understand that Employer/Employer's representative will not entertain any deviations other than those specified below and accepted by Employer/Employer's representative in writing:

Refer Clause no. of NIT	Deviations	Justification for the deviation

Name of the Work.....

Specification No.....

Signature: .....

Name: .....

Designation: .....

Tenderer's seal with date



FORMAT FOR CONTRACT AGREEMENT

(On Non- Judicial Stamp Paper)

Agreement No.

Dated:

THIS ARTICLE OF AGREEMENT made on this \_\_\_\_\_ day of \_\_\_ 202\_ between the Heavy Engineering Corporation Limited, a Employer registered under the Indian Companies Act. 1956 with its registered office at Ranchi, Govt. of India Undertaking, P.O. Dhurwa (Pin-834004) Dist. : Ranchi (Jharkhand), (hereinafter referred to as the Employer which expression where the context so admit shall include its successors in interest \_\_\_\_\_ and assign) of the one Part and \_\_\_\_\_ (hereinafter referred \_\_\_\_\_ to as "the Contractor" which expression where the context so admit shall include its heirs, executors, administrators legal representatives, successors in business and assign) of the other part.

WHEREAS, the Employer invited bid for the Work " \_\_\_\_\_ " and the bid of the Contractor has been accepted by the Employer vide their Letter No \_\_\_\_\_ dt. \_\_\_\_\_ for a sum of \_\_\_\_\_ [Contract sum in figure & words]

WHEREAS the Contractor has agreed to execute the works on the terms & conditions as stipulated in the Bid and subsequent amendments thereto for a sum of \_\_\_\_\_ [Contract sum in figure & words] for successful completion of the work.

**NOW THIS AGREEMENT WITNESSETH AND IT IS HEREBY AGREED AS FOLLOWS:**

1. In pursuance of the Agreement aforesaid and in consideration for the payment of the sum of \_\_\_\_\_ [Contract sum in figure & words] and/or such sum as may be payable to the contractor, the Contractor shall upon and subject to the said terms & conditions execute and complete the work shown upon in the said drawings and described in the said scope of work as provided for in the said conditions.
2. The time shall be considered as one of the essence of the contract and time for completion of the contract shall be 12 (Twelve) months from the date of placement of work Order.
3. The parties hereto shall respectively and faithfully abide by and submit themselves to the terms & conditions and stipulations contained in this agreement and perform and discharge their part of contract accordingly.



**HEAVY ENGINEERING CORPORATION LIMITED**

**PROJECT DIVISION**

4. This final Agreement has been arrived at between the parties after due consideration of the correspondences, documents, meetings and negotiations held from time to time. The following documents shall constitute the Contract between the Employer and the Contractor. And each shall be read and construed as an integral part of the Contract

<u>Part</u>	<u>Description of Documents</u>
01.	Article of Agreement.
02.	Detailed Bid Notice.
03.	Notification of Award
04.	The Bid and Prices Schedules submitted by the Contractor
05.	Conditions of Contract
06.	Financial terms and conditions
07.	Billing Schedule
08.	Technical Specifications and drawings
09.	Any Other Documents

5. The Contract shall be executed within the purview of the Indian Laws.

In witness whereof the parties hereto have hereunder affixed their signatures at Ranchi on the day, month and year written as above.



< Non Judicial Stamp Paper of Rs. 100>

**INTEGRITY PACT**

*[Instructions : Bidders are advised to submit the Integrity Pact document duly signed, stamped and accepted on each page mentioning the Tender No. and date.]*

**INTEGRITY PACT**

*Between*

**Heavy Engineering Corporation Limited, Ranchi (HEC) hereinafter referred to as “The Principal”,**

*And*

..... , **hereinafter referred to as “The Bidder/  
Contractor”**

**Preamble**

The principal intends to award, under laid down organizational procedures, contracts for ..... The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources and of fairness and transparency in its relations with its Bidder(s) and Contractor(s).

In order to achieve these goals, the Principal cooperates with the international Non- Governmental Organization “Transparency International” (TI). Following TI’s national and international experience, the Principal will appoint an external independent Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

**Section 1 – Commitments of the Principal:-**

- (1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles :-
1. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.
  2. The Principal will, during the tender process treat all Bidders with equity and reason.  
The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/ additional information through which the Bidders could obtain an advantage in relation to the tender process or the contract execution.
  3. The Principal will exclude from the process all known prejudiced persons.



- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

**Section 2 – Commitments of the Bidder/ Contractor**

- (1) The Bidder/ Contractor commit itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
1. The Bidder/ Contractor will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind what-so-ever during the tender process or during the execution of the contract.
  2. The Bidder/ Contractor will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non- submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
  3. The Bidder/ Contractor will not commit any offence under the relevant Anti- Corruption Laws of India, further the Bidder/ Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
  4. The Bidder/ Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder/ Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

**Section 3 – Disqualification from tender process and exclusion from future contracts.**

If the Bidder/ Contractor, before contract award has committed a transgression through a violation of Section 2 or in any other form such as to put his reliability or credibility as Bidder into question, the Principal is entitled to disqualify the Bidder/ Contractor from the tender process or to terminate the contract if already signed for such reason.

- (1) If the Bidder/Contractor has committed a transgression through a violation of section- 2 such as to put his reliability or credibility into question, the principal is entitled also to exclude the Bidder/Contractor from future contract award processes. The imposition and duration of exclusion will be determined by the severity of the transgression. The severity will be determined by circumstances of the case, in particular the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder and the amount of damage. The exclusion will be imposed for a minimum of six months and maximum of 3 years.





- (2) The Bidder accepts and undertakes to respect and uphold the Principal's absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freshly and after obtaining independent legal advice.
- (3) If the Bidder/ Contractor can prove that he has restored/ recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.
- (4) A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.

#### **Section 4 – Compensation for Damages**

- (1) If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from the Bidder liquidated damages equivalent to 3% of the value of the offer or the amount equivalent to Earnest Money Deposit/ Bid Security, whichever is higher.
- (2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.
- (3) The Bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish that the exclusion of the Bidder from the tender process or the terminate of the contract after the contract award has caused no damage or less damage than the amount of the liquidated damages, the Bidder/ Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

#### **Section 5 – Previous transgression**

- (1) The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the TI approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract if already awarded can be terminated for such reason.

#### **Section 6 –Equal treatment of allBidders/ Contractors/ subcontractors.**

- (1) The Bidder / Contractor undertakes to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
- (2) The Principal will enter into agreement with identical conditions as this one with all Bidders, Contractors and subcontractors.
- (3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.



**Section 7 – Criminal charges against violating Bidders / Contractors/ Subcontractors**

If the Principal obtains knowledge of conduct of a Bidder, Contractor or subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the principal will inform the Vigilance Office.

**Section 8 – Independent External Monitor/ Monitors (Three in number depending on the size of the contract) ( to be decided by the Chairperson of the Principal)**

- (1) The Principal appoints competent and credible External Independent Monitor for this Pact. The task of the monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- (2) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal.
- (3) The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the monitor, upon his request and demonstration of a valid Interest, Unrestricted and unconditional access to his project documentation. The same is applicable to subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder Contractor /Subcontractor with confidentiality.
- (4) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- (5) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or heal the violation or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- (6) The monitor will submit a written report to the Chairperson of the Board of the principal within 8 to 10 weeks from the date of reference or intimation to him by the "Principal" and, should the occasion arise, submit proposals for correcting problematic situations.
- (7) Monitor shall be entitled to compensation on the same terms as being extended to / provided to outside expert committee members/Chairman as prevailing with with Principal.
- (8) If the Monitor has reported to the Chairperson of the Board, a substantiated suspicion of an offence under relevant anti corruption law of India, and the Chairperson has not within reasonable time, taken visible action to proceed against such offences or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- (9) The word 'Monitor' would include both singular and plural.



**Section 9 – Pact Duration**

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/ agreed during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by Chairperson of the Principal..

**Section 10 – Other provisions**

- (1) This agreement is subject to Indian Law, Place of performance and jurisdiction is the Registered Office of the Principal, i.e. Ranchi.
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- (3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- (4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

-----  
 (For & on behalf of the Principal)  
 (Office Seal)

-----  
 (For & on behalf of Bidder/ Contractor)  
 (Office Seal)

Place: ..... Date: .....

Witness 1: ..... (Name & Address)

Witness 2: ..... (Name & Address)



**AFFIDAVIT**

(NON JUDICIAL STAMP PAPER OF Rs. 50/-)

I.....  
Partner/ Legal      Attorney      Proprietor/ Accredited      Representative      of      M/s.  
..... Solemnly declared that:

1. I/We      are      submitting      tender      for      the      work  
.....  
..... against Tender Notice No.  
----- dated -----
2. None of the partners of our firm is relative of employee of South Eastern Coalfields Limited and Heavy Engineering Corporation Limited.
3. All information furnished by me / us in respect of fulfillment of eligibility criteria and information given in this Bid is complete, correct and true.
4. All documents / credentials submitted along with this tender are genuine, authentic, true and valid.
5. If, any information or document submitted is found to be false /incorrect at any time, Employer may cancel my Bid and action as deemed fit may be taken against me /us including termination of the contract, forfeiture of all dues including Earnest Money and blacklisting of our firm and all Partners of the firm etc.

Signature of the Tenderer

Dated.....

**Seal of Notary**



**HEAVY ENGINEERING CORPORATION LIMITED**

**PROJECT DIVISION**

**COAL HANDLING PLANT (35-70 MTPA) GEVRA PROJECT, SECL**

**SCOPE OF WORK & TECHNICAL SPECIFICATION**

**FOR**

**EXECUTION OF CIVIL & STRUCTURAL WORKS OF 6 NOS. OF**

**SUB-STATION BUILDINGS ON TURNKEY CONTRACT BASIS**

**FOR**

**COAL HANDLING PLANT (35-70 MTPA)**

**AT**

**GEVRA OC**

**SOUTH EASTERN COALFIELDS LIMITED, KORBA**



**HEAVY ENGINEERING CORPORATION LIMITED**

**PROJECT DIVISION**

**COAL HANDLING PLANT (35-70 MTPA) GEVRA PROJECT, SECL**

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**HEAVY ENGINEERING CORPORATION LIMITED**

**PROJECT DIVISION**

**COAL HANDLING PLANT (35-70 MTPA) GEVRA PROJECT, SECL**

## **SECTION-1**

### **GENERAL INTRODUCTION**



## HEAVY ENGINEERING CORPORATION LIMITED

### PROJECT DIVISION

#### COAL HANDLING PLANT (35-70 MTPA) GEVRA PROJECT, SECL

### GENERAL INTRODUCTION

#### 1. PREAMBLE

- 1.1 Gevra OC Expansion (35-70 Mty) project has been formulated with a view to meet the increased demand of power grade coal in the country. The project report has been approved in March 2016. The expansion project envisages dispatch of coal through rail to other various consumers.
- 1.2 Gevra Expansion CHP Phase-II with a nominal handling capacity of 30 Mty of coal has been earmarked for supply of coal to various consumers through existing Silos-1,2,3 & 4 and proposed Silo-5 & 6 (under the scope of the work).
- 1.3 The entire coal production, in central in-pit and western side of the mines, has to be dispatched through the Railway rakes by Rapid Loading System with six number of Silos (four nos. of existing silos viz 1, 2, 3 & 4 and two nos. of proposed silo-5 & 6 which is in the scope of the subject work). It is envisaged that the projected dispatch requirement of around 70 Mty of coal from the mine through rail route will be met up by above six nos. of silos and a rapid loading arrangement in the eastern sector.
- 1.4 Two numbers Silos each of 3000 Te capacity (self-flowing) with 2 nos. Pre-weigh hoppers of capacity 1.2 times (minimum) the wagon capacity and 2 nos. Rapid Loading Systems (RLS) outfits with the loading rate of 4500-8500 TPH, 1 nos. Automatic Sampling units, 3 nos. Passenger Lifts, 2 nos. Bridge Conveyors between the silos, 2 nos. Elevating Conveyors and one Overhead RCC Bunker of 35,000t with 4500 tph plough feeder for reclamation coal to elevating conveyors for the silos, Truck Receiving Station consisting of two sets of 5x 500 te hopper along with dust suppression system, firefighting system, chutes, electrical hoist blocks, lifting tackles, associated electrical items such as power supply, illumination, central control system, earthing, lightning protection, communication etc., civil and structural works, allied works such as plant cleaning system, condition monitoring system, drinking water supply, service roads, landscape, drainage, maintenance and repair facilities with tools and instruments etc. will be constructed on turnkey basis at Gevra OC Expansion (35-70 Mty) project as Phase-II of the Gevra Integrated CHP.
- 1.5 All the two silos will be fitted with two numbers traversing/telescopic loading chutes each and double railway lines will pass below each silo such that there will be one loading chute over each railway track. The system will enable simultaneous loading of coal into rakes on both the lines below each silo.
- 1.6 Necessary technical parameters have been given in the subsequent clauses of this document for design of the plant. Bidders are required to carry out checks to ensure guaranteed performance of the system.
- 1.7 Bidders are requested to get themselves acquainted with the various provisions of this document before submitting their offer. Bidder may visit the site at their own cost to get the necessary details and become conversant with the site conditions. Due to undulations of the site, the levels etc. shown in the drawings are indicative and have been given for the tendering purpose only. Bidders are required to make an assessment of the site conditions before tendering their offers so as to include in their offers all the expected costs due to variations in the levels etc. as indicated in the drawings.
- 1.8 The scope of work shall be read along with Preamble, Introduction & Basic data, Plant description, Civil and Structural works etc. which are elaborated in Technical Specification.





## HEAVY ENGINEERING CORPORATION LIMITED

### PROJECT DIVISION

#### COAL HANDLING PLANT (35-70 MTPA) GEVRA PROJECT, SECL

## 2. INTRODUCTION AND BASIC DATA

### 2.1 INTRODUCTION

- 2.1.1 This tender document is for construction of two nos. of RCC silos each of 3000 Te capacity (self flowing) with two nos. pre-weigh hoppers of capacity (self-flowing) 1.2 times (minimum) the wagon capacity and two nos. Rapid Loading Systems (RLS) with loading rate of 4500-8500 TPH, Overhead RCC bunker of 35,000 Te capacity, Truck receiving station of two sets of 5 x 500te hoppers and associated belt conveyors of 2 x 4500 tph along with all necessary allied and auxiliary systems of matching capacity for receiving raw coal and loading raw coal into the Railway rakes below the Silo nos. 5 & 6 (Phase-II of Gevra Integrated CHP).
- 2.1.2 Coal of (-) 100 mm size won by surface miners will be fed into the hoppers of truck receiving station at in-pit from where it will be discharged onto in-pit belt conveyors. The coal from in-pit belt conveyors will be transferred either to TH-2 & some portion on existing L-series (for feeding into the existing silos-1, 2, 3 & 4) or to the tripper conveyors of 35,000t bunker for feeding into the silos 5 & 6 through reclaim conveyors.
- 2.1.3 The silos-5 & 6 will be interconnected by means of a pair of bridge belt conveyors. Each of Silo No.5 and Silo No.6 will be fed by a pair of belt conveyors of 1800 mm belt width and 4500 TPH nominal capacity. The bridge belt conveyors between Silo No.5 & Silo No.6 will also be of 1800 mm belt width and 4500 TPH nominal capacity.
- 2.1.4 Each of the two silos will be fitted with two nos. pre-weigh hoppers and two nos. traversing/telescopic loading chutes on two different tracks, for weighing and discharging coal into railway wagons under the silos. Both the chutes of a silo will operate simultaneously for simultaneous loading of rakes on both the tracks below the silo. Provision will be made to facilitate simultaneous as well as individual operation of the chutes for loading of wagons below the silos. The loading system will facilitate bi-directional movement of the rack while loading. The capacity of wagons will be in the range of 60t to 80t, however in future higher capacity wagon may also be required to be loaded as may be provided by the Indian Railways. The bids shall be based on the preliminary drawings, specifications and other conditions of contract as provided in the tender document.

### 2.2 LOCATION AND COMMUNICATION

- 2.2.1 Gevra Open Cast Expansion project of Gevra area forms south central part of Korba coalfields. The project is located in the Korba district of Chhattisgarh State. The proposed silos for supply of coal to various consumers through railways will be located near Gevra Road station of SECR and will be connected to the proposed East-West (Gevra Road – Pendra Road) rail corridor.
- 2.2.2 The project is well connected by rail and road. Gevra Road and Korba Railway stations on the Champa – Gevra Road branch line of South Eastern Railway are at a distance of about 10 km and 16 km respectively. The Gevra road Railway Station is about 93 km from Bilaspur and 708 km from Howrah by rail.
- 2.2.3 The project is well connected by an all weather metallic Road. It is about 90 km by road from Bilaspur, the head quarters of SECL.



## HEAVY ENGINEERING CORPORATION LIMITED

### PROJECT DIVISION

#### COAL HANDLING PLANT (35-70 MTPA) GEVRA PROJECT, SECL

### 2.3 PHYSIOGRAPHY

2.3.1 Korba district of Chhattisgarh State. The proposed silos for supply of coal to various consumers through railways will be located near Gevra Road station of SECR and will be connected to the proposed East-West (Gevra Road – Pendra Road) rail corridor.

### 2.4 CLIMATE CONTIONS

2.4.1 The climate of the area is dry to moist tropical with summer from April to June, rainy season from July to September and winter season from November to February. The ambient temperature rises to maximum of about 48°C in May and drops to minimum of about 7°C in January.

2.4.2 The average annual rainfall is about 1265 mm. The highest rainfall recorded within a period of 24 hours over the last 45 years is 252.22 mm in September 1973.

2.4.3 The relative humidity varies from 70% to 94% during monsoon and 17% to 78% during summer.

2.4.4 The wind direction is generally westerly to south westerly and wind velocity is to be considered as per latest edition of IS (IS 875 Part 3).

### 2.5 BASIC DATA

#### 2.5.1 Coal Quality

i.	Type of coal	:	Bituminous, non-coking
ii.	Ash	:	Up to 22-45%
iii.	Inherent Moisture	:	Up to 9%
iv.	Abrasivity	:	Slightly abrasive
v.	Lump size	:	(-) 100 mm in general
vi.	Surface moisture	:	Varies with season
vii.	Bulk density	:	1.0 t/cum for volumetric and 1.2 t/cum for weight consideration
viii.	Quality of coal	:	Av. Grade "G10"

#### 2.5.2 System Parameter

i.	Coal to be handled	:	30 Mty.
ii.	Number of Silo	:	2
iii.	Capacity of Surge in Silo	:	3000 te
iv.	Specifications of belt conveyors	:	1800 mm wide, 4500 tph (nominal) capacity.



**HEAVY ENGINEERING CORPORATION LIMITED**

**PROJECT DIVISION**

**COAL HANDLING PLANT (35-70 MTPA) GEVRA PROJECT, SECL**

## **SECTION-2**

**TECHNICAL SPECIFICATION**

**FOR**

**DESIGN, PREPARATION OF DRAWING AND  
EXECUTION OF CIVIL & STRUCTURAL WORKS FOR  
6 NOS. of SUB-STATIONS**



## HEAVY ENGINEERING CORPORATION LIMITED

### PROJECT DIVISION

#### COAL HANDLING PLANT (35-70 MTPA) GEVRA PROJECT, SECL

### CIVIL AND STRUCTURAL WORKS

#### 1. GENERAL

The scope of work shall include detail design, preparation of working drawings, dismantling, supply of construction materials, transportation, fabrication, erection, construction, modification, storage of construction material etc. and all necessary civil & structural works required for complete construction of the 6 Nos. Sub-Station Buildings on **TURKEY CONTRACT BASIS** for **Coal Handling Plant (35-70 MTPA) at GEVRA OC, South Eastern Coalfields Limited.**

All the works including designs, drawings, construction, fabrication and erection of the Sub-Station Buildings etc. shall be done strictly as per latest relevant BIS Code of Practices. Wherever no Indian Standard is available, British, American, German, Soviet or other international standards may be used only as per its applicability and justification.

#### 2. BASIC SCOPE

The scope of work covers all the civil and structural works for completion of the Sub-Station Buildings in all respect. The scope of bidder shall include but not limited to the following:

- 2.1 Design, preparation of drawing, submission and obtaining approval of drawings of all civil and structural works related to Sub-Station Buildings.
- 2.2 Execution of all civil/structural works consisting of the following:
  - 2.2.1 Preparation of construction site.
  - 2.2.2 Pre -site survey work and during execution of the work.
  - 2.2.3 Grading, levelling, excavation, construction, site clearing, erection etc. for all Sub-Station Buildings as detailed in the NIT.
  - 2.2.4 Establishment of site office, proper storage and complete watch and ward shall be in the scope of bidder. All temporary buildings, structures, office, stores etc. as required for construction purpose to be removed / dismantle after completion of the work.
  - 2.2.5 Supply, transportation of all civil construction materials and other materials as required at site.
  - 2.2.6 Transportation, supply, fabrication, erection and painting of structural steel works.
  - 2.2.7 Execution of all civil works.
  - 2.2.8 All civil and structural works required for equipment erection as per requirement etc.
  - 2.2.9 Inspection and Testing of construction material and other tests related to civil & structural works.
  - 2.2.10 Drainage and sewage treatment including its dovetailing with the existing system.
  - 2.2.11 All the protective measures for proper drainage for safety of structures, against ingress of water / seepage due to seasonal nallahs and its tributaries which are flowing through the construction site area as per actual site conditions and requirement.



## HEAVY ENGINEERING CORPORATION LIMITED

### PROJECT DIVISION

#### COAL HANDLING PLANT (35-70 MTPA) GEVRA PROJECT, SECL

- 2.2.12 All the protective measures for safety of men and materials during construction against rail/dumper movements on existing railway tracks/haul roads.
- 2.2.13 Arrangement of construction power, gas, water etc. shall be in the scope of the bidder.
- 2.2.14 Perception and remedial measures for the safety of entire construction area under the scope keeping in view the adjoining natural and artificial features such as hill slopes, nallah, buildings, etc.
- 2.2.15 Any civil & structural works required for completion of electrical equipment erection / installation shall be done by the contractor.
- 2.2.16 Any job related to civil & structural work including design, drawing and execution envisaged by the Employer during construction, which may not be included in the NIT document but is required for completion of the work shall be deemed to be included in the scope of work. There will be no extra cost payable on this account.

### 3. DESIGN / ENGINEERING

#### 3.1 DESIGN CRITERIA

- 3.2 All detailed design and working drawings shall be prepared with proper coordination and inter-relation with electrical assignment drawing and equipments. The design of RCC structure shall be carried out in general as per code of practice of plain and reinforced concrete for general buildings construction BIS 456-2000 and other relevant standards including up-to-date amendments. The steel structure shall be designed and fabricated as per Code of practice for use of structural steel in general building construction BIS 800 (latest edition) with up to date amendments and other relevant IS standards. The building/ structure shall conform to local by-laws, rules and regulations for industrial buildings and as per relevant Indian Standards. Latest codes of practice with amendments up to date shall be strictly followed. In the absence of BIS codes, British standards Institution or the approved international bodies codes could be considered for design as per its applicability and justification.

#### 3.3 LOAD CONSIDERATION

- 3.3.1 Loads to be considered in design shall be as per relevant BIS codes of practices. Generally, in design the effect of dead loads, live loads, load due to impact, vibration, erection, wind load, seismic loads, dust load and load due to surcharge and moving vehicles, effect of blasting etc. wherever applicable shall be considered. In general, live load, wind loads, etc shall be as per BIS-875 (latest edition). Seismic loads to be considered in design shall be as per BIS 1893 (latest edition). The maximum bulk density of coal shall be taken as 1.15Te/m<sup>3</sup> for load design calculation in respect of coal retaining structures. Effect due to blasting is to be considered while designing the structures, as per the provision of BIS: 6922 with latest revision.
- 3.3.2 The topography factor for the calculation of design wind pressure shall be calculated as per BIS 875 read with the latest amendment.

#### 3.4 ANALYSIS & DESIGN

- 3.4.1 All RCC and steel structure shall be designed in accordance with relevant IS Codes of practice of latest revision. In the analysis of structures, the worst loading combination of monorails, equipment loads, their impact, wind/seismic loads/blasting effect, coal and other loads as envisaged shall be considered.



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3.4.2 All civil & structural analysis shall be carried out during detail design by the latest version of **STAAD-PRO software**.

### 3.5 DETAIL DESIGN AND PREPARATION OF DRAWING

Broadly all the dimensions as given in NIT drawings are given for bidding purpose only. These dimensions are indicative & may require changes during detail design/drawing.

#### 3.5.1 PREPARATION OF DRAWING

3.5.1.1 All the drawings shall be prepared in accordance with the provision of latest Indian Standards. All drawings shall be sufficiently detailed and dimensioned to help in speedy construction, fabrication and erection of structures. Wherever, any structure is presented in more than one sheet of drawings, same scale and notations shall be used in all the sheets for linking the drawings with each other. All modifications made in structure during various stages of construction should be duly incorporated in working drawings.


3.5.1.2 Bar bending schedule, detailed material list and specification of works shall be prepared / detailed. Working drawing shall also include general arrangement, architectural and RCC drawings showing plans at different levels with sectional elevations. Separate detailed drawing shall be prepared for inserts and anchor bolts including their fixing details. The design drawings associated with steel structure should show the force in the members, complete details of all members, joints, gusset plates, welding, riveting, bolting, etc. The drawings should also show the weight of each assembly/sub-assembly as far as possible. In addition to design drawings, fabrication drawings shall also to be prepared, showing item-wise details, erection units, materials list, details of fasteners with assembly, etc.

3.5.1.3 All the designs and drawings shall be carried out in accordance with detail Technical Specification including design criteria and relevant latest Indian Standard code. All the designs **should be cost effective**.

3.5.1.4 All drawings submitted by the bidder shall be as per the latest revision of IS: 696 or equivalent International Standards. In general, it is desired to keep the same size for all drawings for ease of filing and reference. All GA drawings shall be oriented to match the Plant arrangement drawings and shall have a key plan identifying the Plant area to which they apply and marked with an arrow pointing to the north at the top of the sheet. There shall be sufficient reference notes on the drawings to permit identification of all related drawings and documents which are required for proper understanding. Drawings and bills of materials shall give broad specifications and quantities of all materials along with the technical notes required for the work and shall be cross-referred for easy identification.

3.5.1.5 All drawings shall be dimensioned in the metric system and titles / written notations shall be in English language. While preparing the drawings, the drafting standards adopted shall be such that good, clean and legible e-form of the drawings can be obtained. Drawings prepared by the bidder shall be suitable for transmitting electronically and digitization for preservation.

3.5.1.6 Preparation of all drawings shall be carried out in **AutoCAD 2003** version or its higher version.

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### 3.5.2 SUBMISSION OF DESIGN/DRAWINGS

The bidder shall submit all the relevant general notes for civil & structural works, detail design calculations, general arrangement/ architectural /RCC /detail drawings, bar bending schedule, detailed material lists and specification of works for approval of HEC with onward approval from client's consultant/SECL on standard size sheet.

Scrutiny and approval of drawings shall be carried out through the consultant engaged by client (SECL). All design details and drawings shall be submitted for approval of the following:

- i. General Arrangement / Architectural Drawings
- ii. Detail design calculations
- iii. All detail Civil RCC / Structural GA / Fabrication drawings
- iv. Any other drawings relevant for execution of civil/structural works (for reference only)

Bidder shall submit for approval seven (07) sets of drawings in hard copy and two (02) CDs containing soft copies of design calculation including analysis of force/stress in the structure along with the source from where data, except BIS codes, have been taken (Staad file, excel or any other editable format). Photocopies of such data should be submitted along with the design and drawings in AutoCAD format shall be submitted to the HEC.

### 3.6 PROCEDURE OF APPROVAL OF DRAWINGS

3.6.1 The bidder shall submit one (01) set of check print of design and drawing in hard copy as well as in soft copy to HEC for their pre-scrutiny. After scrutiny, the comments of HEC shall be incorporated and submitted in seven (07) prints along with soft copy of the same on two (02) CD by the bidder within three (03) working days to HEC for onward submission to client SECL / Consultant CMPDIL, Bilaspur for their approval.

#### 3.6.2 Approval by HEC / SECL / CMPDIL

Design & drawing, submitted by the bidder, shall be scrutinized by HEC / CMPDIL/ SECL. Out of seven (07) sets of drawing with two (02) CDs submitted to the HEC and one (01) copy will be sent to the successful bidder after scrutiny with comments, modification or approval as the case may be. The bidder shall carry out the necessary rectification in drawings after discussion with CMPDIL/HEC in a reasonable time as agreed upon mutually (limited to 03 days) and re-submit seven (07) copies of such revised drawings for approval of CMPDIL/SECL. Revised drawings shall then be scrutinized and approved if the comments made by the CMPDIL/SECL are incorporated / taken care of. One (01) copy of such drawing will be sent to the bidder after approval.

3.6.3 The SECL/CMPDIL shall have the final say in the approval of drawings. Drawings so submitted will become the property of the HEC. The approval of the drawings does not absolve the bidder from the overall responsibility of the project for its successful completion of the project.

3.6.4 The bidder shall be responsible for any alterations of the work due to any discrepancy, errors or omissions in the drawings or particulars supplied by him, whether SECL/CMPDIL has approved such drawings or other particulars.



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### 3.7 AS BUILT DRAWINGS

Bidder shall make necessary correction / modification in the drawing as per actual work and shall prepare as built drawing. The bidder shall supply such nine (09) sets of prints of as built drawing including two (02) CDs containing soft copies of drawings in AutoCAD format to the HEC along with one set of reproducible drawings on polyester paper in ink. The same will hold good for other documents also to be supplied by the bidder under the heading of basic scope.

### 4. PERT NETWORK

After the issue of letter of award, the bidder will prepare a master plan in PERT NETWORK only incorporating all the major activities for the successful completion of civil & structural work on turnkey basis and submit it to customer for his approval and comments.

The detailed PERT NETWORK will be prepared for all major activities enlisted in the master PERT NETWORK. The detailed PERT NETWORK will be further discussed with customer and form the basis of monitoring of the project as a whole or activity wise. Necessary corrections will be carried out from time to time by the bidder in consultation with the representative of customer but within the overall limit of time as described in master NETWORK. All the activities of the contract will proceed on the line of approved PERT NETWORK.

### 5. TECHNICAL SPECIFICATIONS

5.1 All workmanship, materials and work items shall confirm to relevant IS / BIS / MoRTH / NBC STANDARDS. In case of items not adequately covered by above mentioned Indian Standards, the CPWD / NBO practices shall be followed.

5.2 Safety Measures for Civil & Structural Works

In respect of safety, Part – 7 Constructional Practices & Safety of National Building Code – 2005 shall be followed. All necessary safety measures to be adopted as recommended by relevant IS / BIS code to protect adjunct / nearby structure, workmen etc.

All works shall be carried out as per the item description and design & drawing supplied and as per the relevant IS / BIS / NBC – 05 and as per direction of the Engineer-in-Charge.

### 6. DETAILED SCOPE

#### 6.1 GENERAL

The civil and structural work under, its scope shall cover all aspects of work, including detail design and preparation of working drawings with proper coordination and inter relation with equipment, execution and erection of the complete civil and structural works, including sanitation, internal plumbing for Sub-Station buildings.

The execution of civil and structural work consist of providing all labour, supervision, materials, testing of construction materials, scaffolding, construction equipment, tools and plants, supply, transportation, and all incidental items not specified but implied for successful completion of the works in accordance with drawing and specification including any fee, tax, royalty as may be applicable in the work zone.





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The nature of work shall generally involve chemical testing of construction water for corrosive action of chemical and other deleterious materials, earth work in filling and excavation in all types of soil and rock, dewatering, shoring, back filling around completed structures, disposal and form work, brick work, fabrication and erection of structural/miscellaneous steel, inserts, anchor bolts, RCC/chequered plates trench covers, sewerage system, surface and storm water drainage, ventilation related to the Sub-Station buildings, damp proofing and other ancillary items.

The drawings enclosed in NIT gives a general idea about the work to be performed. These are preliminary drawings for bidding purpose only and are by no means the final drawings showing the full range of the work under the scope. Design & drawing has to be prepared according to the system/assignment drawing. Work has to be executed according to the approved working drawings, fabrications drawings with additions, alterations and modification made from time to time as required or approved by the client.

#### 6.2 DETAIL OF SUB-STATION BUILDINGS AND OTHER MISCELLANEOUS WORKS

(The requirements indicated hereunder are minimum and are to be synchronized with process/functional/ design/ normative/ codal/ statutory/ aesthetic and such other requirements expressly stated in this document or otherwise). The civil and structural works are related mainly to the following areas (but not limited to):

##### 6.2.1 Sub-Station Building

Sl No	Sub-Station Buildings	Floor area required (minimum)
1	<p><b>Six (06) nos.</b> of Electrical sub-stations each comprising of Control room, HT Switch Board Room, MCC Room, Capacitor bank room, Battery Room, Transformer Room, Store room, Maintenance Room, tool room, officer in charge room, Engineers' Room, Supervisor/ electrician room, toilet facilities etc.</p> <p>Sub-stations building shall be designed based on electrical assignment drawings supplied by HEC after award of the work. The required plinth area shall be according to the electrical assignment drawings.</p>	Two storied RCC Structure with Ground floor area (minimum) of 600 sqm and First floor area (minimum) of 217.50 sqm.

All the sub-stations buildings are to be designed by the bidder as per functional requirement but cannot have floor area less than that mentioned above.

All the Sub-Station buildings except otherwise mentioned below shall be of RCC framed structure construction plastered and finished with cement based paint outside. Plinth level of the buildings shall be 450mm above final accepted graded level around the buildings. Steel doors, rolling shutters, collapsible gates and steel windows are to be fitted as per requirement. Steel windows shall be glazed with wired glass and suitable grills of square bar. All the buildings shall be given pre-construction anti-termite treatment. The floor shall be of terrazzo type or any other type depending on the functional requirement. The store floors shall be of 150 mm thick RCC M25 grade of adequate thickness of sand filling and mud matting over the base course followed by 12 mm thick ironite / ferrosite topping. The floor of the battery room shall be anti-acidic. The battery room should be provided with exhaust fan to exhaust the fumes. The internal surfaces shall be finished with plastic emulsion paint of approved shade or of any other finish depending on functional need.



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6.2.2 The substations will have HT Switch Board Room, MCC Room, PLC room, Control room, Capacitor bank room, Battery Room, Transformer Room, Store cum Maintenance Room, tool room, officer-in-charge room, Engineers' Room, Supervisor/ electrician room, rest shelter, first aid centre, toilet facilities etc.

The flooring of the building will be as per the functional/safety requirement. The details of plastering, brick work, RCC work will be as per technical specification which has been mentioned elsewhere in this document. The layout of the cable trench will be as per system requirement. The invert level of the cable trench shall be kept minimum 0.5 m above finished ground levels and the plinth of the building shall be fixed accordingly. The building shall be provided with RCC roof. The RCC roof of the structures should be treated with suitable water proof coating/ felt of standard specifications. There will be suitable arrangement for lifting the transformer in case of breakdown/maintenance for which suitable RCC paved platform shall be constructed at same level outside the substation building to facilitate handling of the transformer and other equipment. The scope covers construction of complete building with cable trench and foundation of the equipment in all respect.

6.2.3 The entrance to both the MCC room, control room / PLC room shall have double doors suitably designed to prevent sudden pressure loss. The flooring in MCC room and switchgear room shall be of IPS with insulating rubber matting.

6.2.4 Cable trenches shall be provided with chequered plate or with pre-cast RCC covers with lifting arrangement. Cable trenches as well as pre-cast cover shall be provided with edge protection angles. All embedment/block cuts as required elsewhere in these specifications shall be provided.

6.2.5 All corners and edges in openings shall be protected with angle of minimum size 75 mm x 75 mm x 8 mm with suitable lugs embedded in concrete. Similarly all edges of concrete members coming in contact with flow of coal or any other moving material shall be provided with similar edging for protection.

6.2.6 The Substation Buildings shall be built such that no water insertion shall be made inside the building.

6.2.7 PCC pavement of minimum size (3m x 3m) shall be provided in front of Power lighting transformer up to 1.0 m height from FFL.

6.2.8 150 mm GI heavy duty pipe shall be provided at the entry of Cable inside the building above 1000 mm FFL level as per system requirement. Minimum quantity of GI pipe shall be 100 meter and minimum no. of hole shall be 200.

6.2.9 The cable trench will be built such that no water logging happened. The cable trench will be waterproof.

6.2.10 The insert plate of size 150 x 150 mm inside cable trench and on ceiling shall be provided in at least two rows @ 1500 mm c/c. The insert plate for light fitting and LT Bus Duct shall also to be provided in sub-stations. The location of insert plate shall be shown during detail engineering. The insert plate shall be provided as per system requirement. Minimum number of insert plate shall be 500 nos. in each sub-station building.

6.2.11 The removable 6 o/p chequered plate size 800 x 800 mm shall be provided on cable trench for ground and first floor for vacant area as per assignment drawing. The actual supply and erection of chequered plate shall be in the scope of the bidder.



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- 6.2.12 The tentative levels are indicated in the tender drawing. The levels of sub-station buildings shall be decided during detail engineering.
- 6.2.13 The orientation of sub-station buildings may vary as per detail engineering drawing.
- 6.2.14 The size of sub-station buildings shown in tender drawing is tentative. It may vary during detail engineering.
- 6.2.15 Arrangement for fixing the ceiling fan in sub-station shall be provided as per requirement.
- 6.2.16 PLC room and entry of PLC room door shall have glass partition with 1.5 m brick work along periphery.
- 6.2.17 Floor load for ground and first floor of sub-station building shall be minimum 850.00 kg/sqm.
- 6.2.18 First Floor core cutting (minimum 10 Nos. of 100 mm dia) shall be made as per requirement during detail engineering.
- 6.2.19 Wall opening for LT Bus Duct shall be considered by the bidder during detail engineering for Power Transformer room.
- 6.2.20 The erection opening shall be considered as per tender drawing, after erection of electrical work same has to be closed by the bidder.
- 6.2.21 Any civil & structural work required for completeness of electrical work for sub-station buildings, if any shall be considered by the bidder.
- 6.2.22 The roof concealed conduiting shall be in scope of work. The assignment drawing for concealed wiring shall be given by HEC during detail engineering.
- 6.2.23 All work shall be executed as per system requirement, assignment drawing and site conditions by the bidder.
- 6.2.24 **Toilet**
- Toilets shall be provided as per requirement. The facilities shall include water closet, urinals, wash basin looking mirror, cistern, towel rail, glass shelf, flush doors etc. The skirting up to a height of 1.5 m shall be of glazed tiles. The floorings shall be of ceramic floor tiles.
- 6.2.25 Arrangement for installation of overhead tanks of required capacity 2 cum (approx) shall be provided over the sub-station buildings as per system requirement. Necessary internal piping arrangement for water supply shall be provided. All necessary fittings and fixtures for toilets and sanitary for various buildings shall be covered in the scope of the tender.

**6.2.26 Drainage and Sewerage Arrangements**

i. Drainage Arrangements

Proper surface drainage facilities of adequate dimensions, specifications and slope shall be provided for the sub-station buildings to take care of all the storm water which is likely to be encountered considering the topography and the natural drainage of the construction sites and the adjoining area. Dimensions and specification of drains and cross drainage works shall be so engineered and



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constructed so as to receive and discharge all the storm water entering into the proposed construction area including run off from the area outside the proposed construction site which is likely to enter the proposed plant area. The storm water shall be disposed of to the nearest nallah or shall be taken to a suitable distance where it can be properly disposed. Drain shall be provided with suitably designed precast RCC covers/ culverts wherever necessary. All the drains shall be pucca drains.

#### ii. Sewerage

Proper sewerage system shall be provided for handling and treatment of domestic sewage. This will include provision of septic tank, soak pit, sewer line, man hole, inspection chamber and all other fittings and fixtures etc. needed for the same.

### 7. OTHER WORKS/REQUIREMENTS

i. The information provided by HEC for soil investigation shall intend to serve as a guideline to the bidder. The bidder is required to inspect and examine the site and its surroundings and satisfy himself as to the nature of ground, rainfall and the soil, the availability and suitability of other requirements, as required for fair bidding purposes. If deemed necessary, the bidder may carry out his own detail soil investigation and collection of hydrological data, rainfall data to suit his requirement and ascertain the existing sub-soil conditions. The bidder shall be prepare and submit a comprehensive soil report with recommendations for type of foundation, bearing capacities, method of deep excavation, probable settlement for foundations etc. for approval of the owner/consultant. Reports approved by the HEC/CMPDIL/SECL shall be finally adopted for design and engineering. The cost of any such soil investigation shall be included in the awarded price. The price quoted by the bidder shall be firm and no claim for additional payment will be allowed on account of variation in sub-soil conditions during actual execution.

#### ii. Earthwork in excavation

Excavation of earth for all types of soil for construction of all the civil structures is covered in the scope of this contract. Final levelling and dressing of ground in and around the proposed construction site area for drainage purpose is under the scope of this contract and shall be done by the contractor as per technical and functional requirement. The ground will be provided in as it is condition. Excavation for trench, substations building etc. is covered under the scope of this tender. The depth and size of the excavation will be as per approved system requirement and as per detail design drawings. All cuttings and fillings as per required level and profile including transportation / disposal of soil within a distance of 2 km is included in the scope of this bid. If Blasting is required, the contractor has to prepare the site and carry out blast hole drilling as per the requirement. The contractor will be responsible for drilling in all gradients / terrain as per requirement of the work.

Blasting will be done departmentally by SECL and necessary adjustment in the price shall be made accordingly. However, the drilling pattern and blast design parameters are to be decided mutually by the technical representative of the contractor and the project officials on day-today basis so as to avoid any dispute on fragmentation of rock and powder factor.

#### iii. Development works such as Grading/levelling/dressing of site, etc.

Site grading/levelling (minimum 10m around building) shall be done by the bidder within boundary limit of the proposed construction site area under the scope of this contract based on detailed survey to be done by the bidder as per technical/functional and drainage requirement.



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The HFL, Bed level, water flow, etc. of the existing water courses, sub-soil water table shall be taken into consideration while designing the structures. Bidder shall undertake various remedial measures for protection of the proposed construction site area from streams/water courses as per requirement.

iv. Architectural requirements

The sub-station buildings shall have appropriate industrial architectural look, with appropriate colour, shades and structural networks. All the structures should portray architectural excellence with due care to better utilisation of space, service requirements etc. and also encompass concerns as varied as contemporary design, area conservation and environmental issues. The buildings with brick work, concrete and plaster faces shall have cement based paints in aesthetically sound shades as approved and all steel structures shall have oil based paints with louvers and openings for ventilation and better use.

v. Construction, Fabrication, Erection, Commissioning and supervision

a) Clearance of site before start of work

Site will be handed over to the contractor in 'as it is' condition. Any site preparation work including cleaning, cutting, filling, levelling, grading, removal, etc. before start of the actual work shall be done by the contractor to the full satisfaction of Engineer-in-charge.

b) Site Clearance after completion of work

After the completion of work the contractor shall remove scaffolding, sheds rubbish and surplus materials except which are required for rectification of defects. Contractor shall hand over the site in clean and tidy condition after cleaning the total area including floor, drains etc. fit for the use by the owner.

c) Layout and Levels

The layout and levels of all structures, etc. shall be laid by the contractor at his own cost from the general grid of the plot and bench marks given by the Engineer-in-charge for checking the detailed layout and correctness of the layout and levels. But the contractor shall be solely responsible for correctness of layout and levels.

d) Construction Method and Equipment

The Contractor shall submit drawings and write ups indicating a broad outline of how he intends to execute the work.

All construction machineries and equipments such as batching plant, vibrator, welding machine, gas cutting Equipments, etc. shall have to be arranged by the contractor.

e) Modification work

Any modification in civil & structural work if required as per system requirement shall be in scope of the contractor.

f) Installation/Erection and Supervision



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It will be the contractor's responsibility to bring, receive and keep the materials in safe custody in proper condition. Responsibility of handling the materials during manufacturing, transit and handling at site rests with the contractor. All the steel structural will have to be erected and fitted with accessories as per approved drawing. Entire tools and tackles, manpower and any other material required for successful installation will be supplied by the contractor.

g) Commissioning

After completion of civil & structural works and during erection/ installation of equipments, Any civil/structural defect noticed will have to be rectified/replaced at contractors cost. The test run of equipments/system on load will continue till the representatives of consultant or customer is fully satisfied with the performance. Any excuse on the part of the contractor will not relieve him from the responsibilities of successful commissioning of plant to the best satisfaction of consultant/customer.

h) Inspection and testing

All tests required for materials, quality of work and any other tests as required/desired by the Engineer-in-charge shall be at Contractor's cost. The frequency and mode of testing shall be as per latest relevant BIS codes.

vi. Construction Engineer / Supervisor / Surveyors

Qualified and experienced construction Engineer/ skilled supervisor of trade capable and surveyors to handle execution and survey work shall to be deployed by the bidder. The contractor should furnish the list of such technical staff/officers along with the bid documents and ensure the presence of the same during construction period at the site.

vii. Responsibility of Successful bidder

- a) The bidder shall have the obligation to pay the wage/ salary to various categories of its workers/ employee as per latest State Government's minimum wage circular.
- b) Sub-contractor also will have to pay CPF to all categories of workers/employee employed by him as per prevailing rules.
- c) The workers engaged should be covered under Group Insurance Scheme.
- d) The Sub-contractor shall employ his labour based on available fronts and available materials from time to time. No idle labour charge and cost arising out of any such circumstances, what so ever, shall be paid to the Sub-contractor.
- e) Sub-contractor shall use optimum energy and shall take special attention to avoid wastage and misuse of power / energy / water.
- f) The Sub-contractor to adopt such process / method of work that generates minimum environmental pollution.

viii. Wherever required dewatering shall be done by the contractor to avoid damage of equipment, structural, etc. and timely completion of work.



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- ix. As per system requirement envisaged in the NIT documents, various parameters, specifications may undergo changes during detail engineering stage. This shall be carried out by the contractor without any increase in cost.
- x. The Successful bidder shall be solely responsible for obtaining necessary clearance from various statutory bodies including those of Central & State Government, as applicable, during the course of all safety regulations, code of practices for power supply, manufacture / fabrication, installation, transportation, testing, erection work at site without any increase in cost.
- xi. All Mines Acts and regulations will be followed during construction stage
- xii. Miscellaneous Works

All brick work, doors, windows, finishes including architectural treatment, plinth protection, water proofing, damp proofing, glazing etc.

- a) All brickwork shall be carried out as per relevant IS codes and shall be plastered on both faces with 15mm thick cement mortar 1:6 (cement/sand). All external walls shall be of minimum full brickwork thick i.e. 230 mm. RCC ceiling shall be plastered with 6 mm thick plaster. The scope also includes providing and fixing all doors, windows, rolling shutters, finishes, damp proofing, inserts, anchor bolts, embedment's , stairs nosing, railings ladders, edge protection angle, etc. Doors and windows shall be of steel frames and suitably glazed. Openings on external walls of the buildings shall be provided with sunshades.
- b) All equipment foundations.
- c) All inserts, anchor bolts and embedment.
- d) All railings, ladders and platforms.
- e) All RCC work to be done under this specification unless specified, otherwise, shall be of controlled concrete of grade M-25 of IS 456 (Latest) and shall be made with fresh cement.
- f) All RCC work in water retaining structures shall be of concrete of grade M-30 of IS 456 (Latest) and shall be made with fresh cement.
- g) Rebars of high yield strength, high bond, deformed bars of grade Fe 500 conforming to IS: 1786 shall be used.
- h) Painting

All structural steel work shall have one shop coat and one site coat of red oxide zinc chromate and two field coats of synthetic enamel paints as specified elsewhere. However, bidders are to mention the thickness of painting in microns. Field coats shall be applied at two different stages i.e. after erection and before handing over the plant as per directions of HEC Site official.

Painting shall be done as per standard procedure and instructions of HEC/SECL/Consultant.

Painting shall be carried out after thoroughly cleaning all such parts of all dirt, rust, scales, greases, oils and other foreign materials by wire brushing, scarping or sand blasting, and the same being



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inspected and approved by the HEC's/SECL's/Consultant's Engineer and/or his duly authorized representative for painting.

The quality of the finish paint shall be as per the standards of ISI or equivalent and to be of the colour as approved by the HEC's/SECL's/Consultant's Engineer

- i) Proper shed shall be provided above the staircases wherever the stairs are outside.
- j) Any other works/services/requirements whether specifically indicated or not and found necessary to be incorporated on later date for safety and completion of work shall also be deemed to have been covered within the scope of work of this tender.

### 8. QUALITY ASSURANCE PROGRAMME

8.1 To ensure that the services under the scope of this contract whether construction/supply/fabrication/erection within the contractor's works or at his sub-contractor's premises or at the construction site or at any other place of work are in accordance with the specifications, the contractor shall adopt suitable quality assurance programme to control such activities at all points necessary. Such programme shall be outlined by the contractor and shall be finally accepted by the Engineer In-charge after discussions before start of project activities. A quality assurance programme of the contractor shall generally cover the following:

- a) Organization structure for the management and implementation of the proposed quality assurance programme.
- b) Qualification data for bidder's key personnel.
- c) Laboratory establishment at construction site for testing of construction material, quality works and other tests related to civil & structural works as per latest relevant BIS codes during the progressive stages.
- d) List and procedure of tests related civil & structure works as per latest relevant BIS codes.
- e) Calibration report of laboratory equipments.
- f) Deputation of lab technician.
- g) Proper documentation and records of laboratory tests.
- h) Protocol for execution of civil & structural works i.e. grading, level, setting layout, plain or reinforced cement concrete, concrete material, their storage, dismantling, excavation, dewatering shoring, bar bending, pouring at all levels, formwork, finishing, painting, fabrication, erection and other miscellaneous works duly inspected by the engineer or his authorized representative before executing the construction works.
- i) No concreting to be done without permission of site engineer.
- j) Pour card report for concreting works.





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- k) Mix design conducted at Govt approved laboratory and accordingly submit the mix design report for the proper relation between water-cement ratio, aggregate to cement ratio, workability and strength of concrete as latest relevant BIS codes.

8.2 All bidder's materials shall be inspected and passed by Engineer from time to time at the source of supplies, manufacturing workshops or at site. The bidder should provide all facilities for such inspection free of cost. Notwithstanding, any inspection at the source, the Engineer shall have liberty to reject any materials brought to site which do not conform to specification without being liable for compensation.

8.3 Any materials brought to site and rejected by the Engineer shall be removed by the bidder from the site of work or the site earmarked for materials at his own cost and within the time stipulated by the Engineer.

## 9. SAFETY

### 9.1 Safety Code – General

- i. Suitable scaffolds shall be provided for workmen for work that cannot safely be done from the ground or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable foot holds and hand holds shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1/4 horizontal to 1 vertical.
- ii. Scaffolding or staging more than 3.25 metres above the ground or floor, slung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 metre high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structures.
- iii. Working platform, gangways and stairways shall be so constructed that they do not suddenly or unequally change level, and if height of a platform or gangway or stairway is more than 1.25 metre above ground level or floor level, it shall be closely boarded, have adequate width and be suitably fenced, as described above.
- iv. Every opening in floor of a building or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of 1 metre.
- v. Safe means of access shall be provided to all working platform and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 metres in length. Width between side rails in a rung ladder shall in no case be less than 30 cm for ladders up to and including 3 metres in length. For longer ladders this width shall be increased at least 6 mm for each additional 30 cm of length. Uniform step spacing shall not exceed 30 cm. All scaffolding, ladders and other safety devices mentioned or described herein, shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use.
- vi. Adequate precautions shall be taken to prevent danger from electrical equipment. When workers are employed on electrical installations which are already energised, insulating mats, working apparel such as gloves, sleeves and boots, as may be necessary shall be provided. Workers shall



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not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

- vii. No materials on any of the sites shall be so stacked or placed as to cause danger of inconvenience to any person or the public.
- viii. The contractor shall provide all necessary fencing and lights to protect public from accident and shall be bound to bear expenses of defence of every suit action or other proceedings at law that neglect of the above precautions and so pay any damages and costs which may be awarded in any such suit, action or proceeding in such persons or which may with the consent of the contractor be paid to compromise any claim by any such person.
- ix. Excavation and Trenching - All trenches, 1.6 metres or more in depth, shall at all times be supplied with at least one ladder for each 20 metres in length or fraction thereof. Ladder shall be extended from bottom of trench to at least 1 metre above surface of the ground. Sides of a trench which is 1.5 metres or more in depth shall be stepped to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. Excavated materials shall not be placed within 1.5 metre of edge of trench or half of depth of trench, whichever is more. Cutting shall be done from top to bottom. Under no circumstances shall undermining or undercutting be done.
- x. Demolition - Before any demolition work is commenced and also during the process of the work:
  - a) All roads and open areas adjacent to the work-site shall either be closed or suitably protected.
  - b) No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by operator shall remain electrically charged.
  - c) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion, or flooding. No floor, roof or other part of a building shall be so overloaded with debris or materials as to render it unsafe.
- xi. All necessary personnel safety equipment as considered adequate by the Engineer-in-charge shall be available for use of persons employed on the site and maintained in a condition suitable for immediate use, and the contractor shall take adequate steps to ensure proper use of equipment by these concerned.
  - a) Workers employed on mixing asphaltic materials, cement and lime mortar / concrete shall be provided with protective gloves.
  - b) Those engaged in handling any materials which is injurious to eyes shall be provided with protective goggles.
  - c) Those engaged in welding works shall be provided with welder's protective eyes shield.
  - d) When workers are employed in sewers and manholes which are in use, the contractor shall ensure that manhole covers are opened and manholes are ventilated at least for an hour before workers are allowed to get into them. Manholes so opened are cordoned off with suitable railing and provided with warning signal or boards to prevent accident to public.
  - e) Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.




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- xii. The contractor shall not employ man below the age of 18 and women on the work of painting with products containing lead in any form. Whenever men above the age of 18 are employed on the work of lead painting, the following precautions shall be taken:
- a) No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
  - b) Suitable face masks shall be supplied for use by workers when paint is applied in the form of spray or when a surface having lead paint is being dry rubbed and scraped.
  - c) Overalls shall be supplied by the contractor to workmen and adequate facilities shall be provided to enable working painters to wash during and on recession of work.
- xiii. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following:
- a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept in good repair and in good working order. They shall be regularly tested and certified as appropriate.
  - b) Every rope used in hoisting or lowering material or as a means of suspension shall be of durable quality and adequate strength and free from patent defects.
  - c) Every crane driver of hoisting appliance/ operator shall be properly qualified and no person under the age of 21 years shall be in charge of any hoisting machine including any scaffold, winch or give signals to operator.
  - d) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of sub-tension, safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with safe working load. In case of a hoisting machine having a variable safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond safe working load except for the purpose of testing.
  - e) In case of departmental machine, safe working load shall be notified by Engineer-in-charge. As regards contractor's machine, the contractor shall notify safe working load of each machine to the Engineer-in-charge wherever he brings it to site of work, and shall get it verified by the Engineer-in-charge.
  - f) Motors, gearing, transmission, electric wiring and at near dangerous parts of hoisting appliance shall be provided with efficient safeguards.
  - g) Hoisting appliances shall be provided with such means as will reduce to the minimum risk of accidental descent of load. Adequate precautions shall be taken to reduce to the minimum risk of any part of a suspended load becoming accidentally displaced.
- xiv. Adequate washing facilities shall be provided at or near places of work.

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## 9.2 Application

These safety provisions shall be brought to the notice of all concerned by display on notice board at a permanent place at the work spot. Persons responsible for ensuring compliance with the safety code shall be named by the contractor. To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the contractor shall be open to inspection by the Engineer-in-charge or his representatives and the Inspecting Officers as defined in the contractor's Labour Regulations.

When work is done near any place where there is risk of drowning, all necessary safety and rescue equipment shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision made for prompt first aid treatment for all injuries likely to be sustained during the course of the work.

Notwithstanding the above conditions (i) to (xiv), the contractor is not exempted from the operation of any other Act or Rules in force.

## 10. Weight and Volume Clause

The quantities shall be within reasonable accuracy. Any variation in quantities on higher side from quoted to during actual execution will not entitle the contractor for any additional claim, while for short fall in the quantity up to 10% no recovery/adjustment shall be made by the Owner. However for shortfall in quantities beyond 10% during actual execution, proportionate reduction in cost of contract for the relevant amount for respective items of civil and structural works will be made. For example - if the quoted quantity of the structural steel is 100 Te and as per actual execution it comes to 85 Te, the proportionate reduction in cost against structural steel will be 5% of the quoted price for structural steel. As such the bidder should work out the quantities with utmost care.



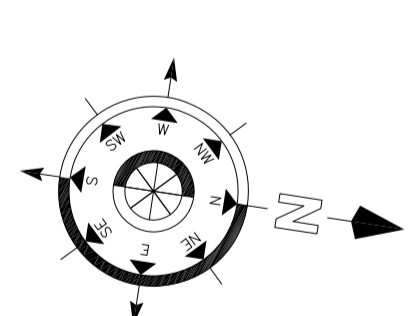
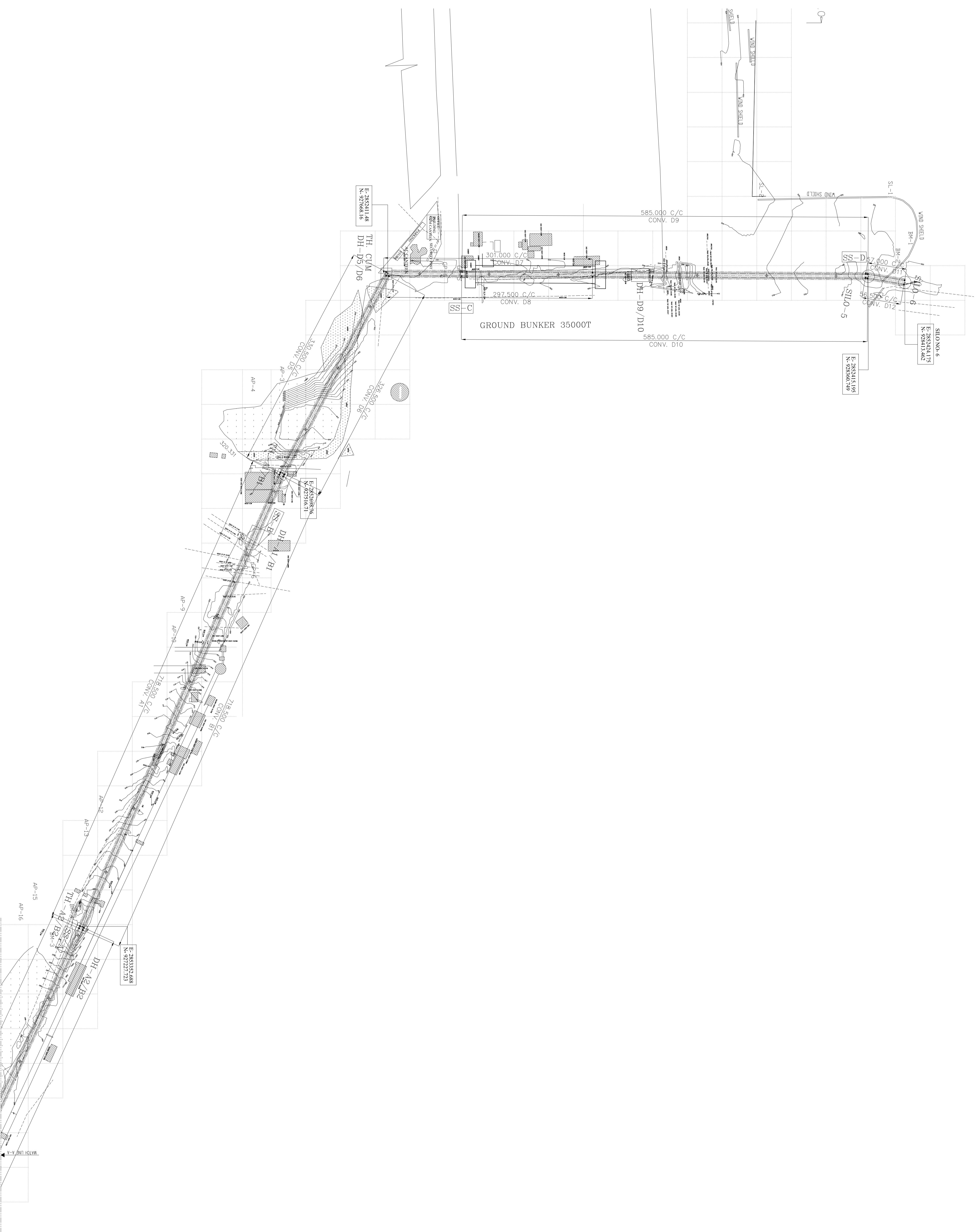
**HEAVY ENGINEERING CORPORATION LIMITED**

**PROJECT DIVISION**

**COAL HANDLING PLANT (4.5 MTPA) BLOCK-B PROJECT, NCL**

## **SECTION-3**

# **TENDER DRAWINGS**



LEGENDS		
Sl.	Description	Symbol
1	DRAIN	
2	ROAD	
3	BUILDING	
4	ELECTRIC LINE	
5	BOUNDARY WALL	
6	CHAMBER / PIT	
7	SHED	
8	WATER-LOGGED AREA	
9	CONCRETE BASE	
10	STAIR	
11	RAILWAY TRACK	
12	FENCING	
13	EXISTING CONVEYOR BELT	
14	PROP. CENTER LINE	
15	CHAINAGE @100M ALONG PROP. C/L.	
16	20M. OFFSET LINE	
17	PROP. CENTER LINE	

FOR TENDER PURPOSE ONLY

CATEGORY OF DRG. APPROVAL INFORMATION REFERENCE RECORD CONSTRUCTION

CLIENT : SOUTH EASTERN COALFIELDS LIMITED, BILASPUR

CONSULTANT: CENTRAL MINE PLANNING AND DESIGN INSTITUTE LTD.

CONTRACTOR: HEAVY ENGINEERING CORPORATION LTD. RANCHI

PROJECT:- COAL HANDLING PLANT AND SILO (PHASE-II) FOR GEVRA (35-70 MTY)

PROJECT TITLE :- GENERAL LAYOUT PLAN

DESIGN: A ALL

DRAWN: A ALL

CHKD: A K

APD: A K

DATE: 19.06.2021

SCALE :- NTS

PROJECT DRAWING NO. HEC-GEVRA-CHP-G-BE-002

REV. 0

REFERENCE DRAWINGS		NOTES		REVISION				
S.NO.	DRAWING NO	TITLE	S.NO.	NO	DATE	DESCRIPTION	BY	APPR.
1.	JOB NO 503254	FLOW DIAGRAM/KEY PLAN & LAYOUT OF CHP	1.			ALL DIMENSIONS ARE IN METER AND LEVELS IN METER.		
			2.			CIVIL & STRUCTURAL ARE INDICATIVE ONLY.		
			3.			LAND CUTTING & FILLING SHALL BE DONE TO ATTAIN REQUIRED LAND PROFILE.		
			4.			MINOR CHANGES IN DIMENSIONS/LEVELS SHALL OCCUR DURING DETAILING.		
			5.			FOR ROAD LAYOUT SEPARATE DRAWING WILL BE SUBMITTED.		
			6.			SUBSTATION BUILDING/AUXILIARY BUILDING LOCATION MAY CHANGE DURING DETAILING.		
			7.			TRANSFER HOUSE/DRIVE HOUSE LOCATION MAY CHANGE DURING DETAILING.		

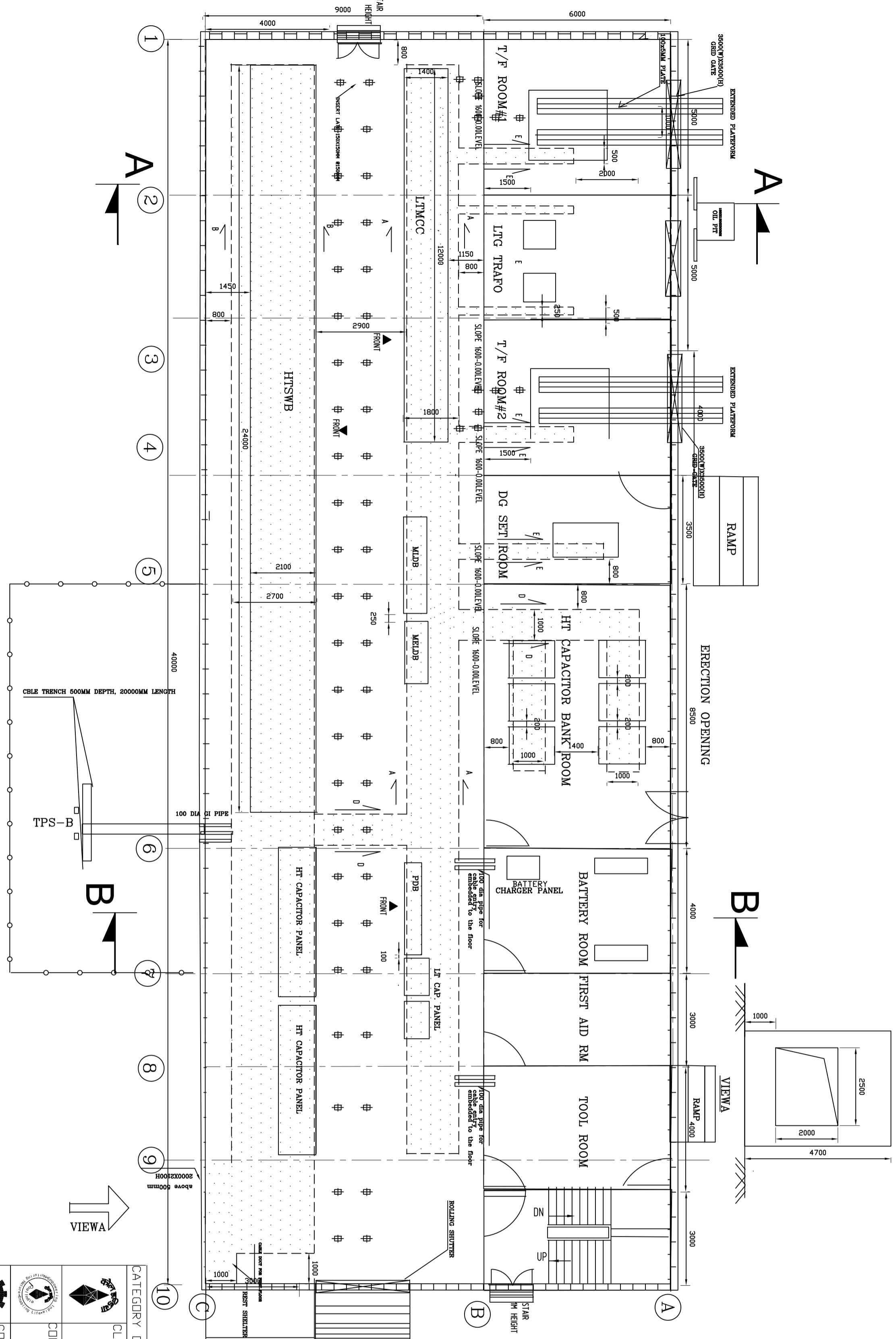
HEC LTD.	HEC LTD.
CHECKED BY	SIGN
CIVIL & STRUCTURAL	DATE
MECHANICAL	
ELECTRICAL & INSTRU.	

DESIGN.	A ALL
DRAWN.	A ALL
CHKD.	A K
APD.	A K
DATE	19.06.2021

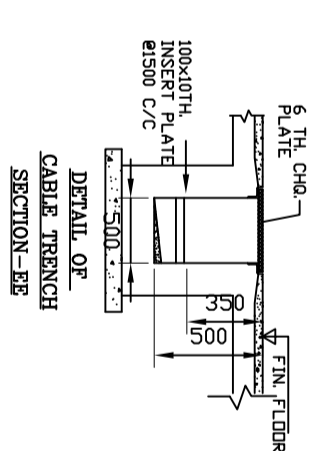
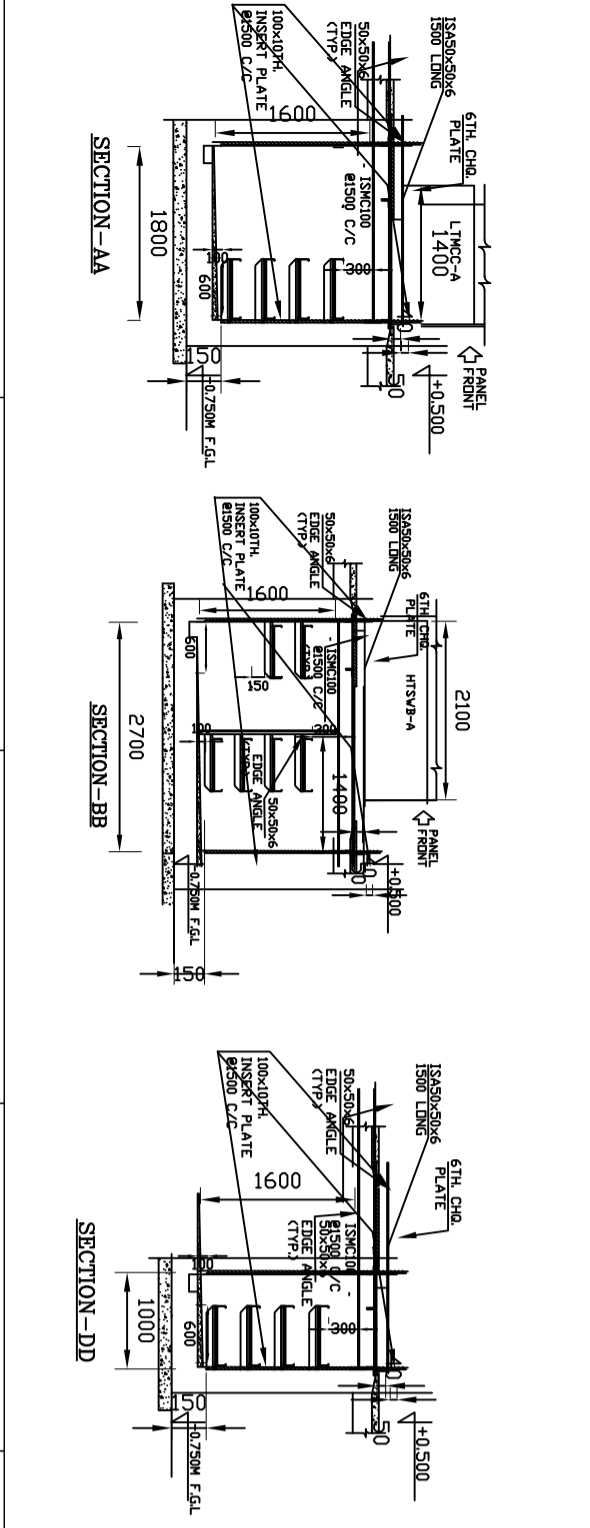
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PROJECT DRAWING NO.	HEC-GEVRA-CHP-G-BE-002
REV.	0

SHEET	1 OF 2
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GROUND FLOOR FGL (ABOVE 1.6M)



SI NO	ITEM	DESCRIPTION	QTY	W	D	H
15.	UPS AND UPSDB	UNINTERRUPTED POWER SUPPLY	01	1800	800	1200
11.	FDA	FIRE DETECTION ALARM	01	800	800	2100
10.	R I/O PANEL	REMOTE INPUT OUTPUT PLC PANEL	01	3400	1200	2100
09.	HT CAPACITOR BANK HT CAPACITOR PANEL	HT CAPACITOR BANK & PANEL	2	4800	1200	2100
08.	PDB	POWER DISTRIBUTION BOARD	01	2000	800	2100
07.	MEIDB	MAIN EMERG. LIGHTING DISTRIBUTION BOARD	01	2000	800	2100
06.	MIDB	MAIN LIGHTING DISTRIBUTION BOARD	01	3100	800	2100
05.	LIGHTING TRANSFORMER	6 GRV/230V LIGHTING TRANSFORMER	01	1800	1500	2100
04.	POWER TRANSFORMER	6 GRV/415V Power Transformer ONAN	02	2500	2150	2100
03.	BATTERY CHARGER	BATTERY CHARGER	01	1075	750	1500
02.	LTMCC	415V POWER MOTOR CENTRE	01	12000	1400	2100
01.	HTSWB	6.6 KV HT SWB	01	24000	2150	2100

THIS DRAWING IS TENTATIVE AND FOR TENDER PURPOSE ONLY

SLNO	REVISING NO	TITLE	SLNO	DESCRIPTION	DATE	DESCRIPTION	BY

CATEGORY OF DOC: APPROVAL INFORMATION REFERENCE RECORD CONSTRUCTION

CLIENT: SOUTH EASTERN COALFIELDS LIMITED, BILASPUR

CONSULTANT: CENTRAL MINE PLANNING AND DESIGN INSTITUTE Ltd.

CONTRACTOR: HEAVY ENGINEERING CORPORATION LTD, RANCHI

PROJECT: COAL HANDLING PLANT AND SILD (PHASE II) FOR GEVRA (35-70MTY)

TITLE: ELECTRICAL SUBSTATION LAYOUT

SCALE: NTS

PROJECT DRAWING NO: HEC-SECL-GEVRA-CHP-E-BE-015

DATE: 06.07.21

SHEET 1 OF 3





