



BHARAT HEAVY ELECTRICALS LIMITED
Ramachandrapuram, Hyderabad - 502 032
Phones : 040 - 23185059, 23182376, FAX No : 040 - 23186122

FACTORY CIVIL ENGINEERING DEPARTMENT

CORRIGENDUM - I

Ref : **Tender Notice No: HY/FCD/OT-07/2013-14 Dt: 30.07.2013 Item no. 1**

Please refer above Tender notice published on 17.08.2013.

Item No.	Name of work
1	Construction of office building (G+2) for PE & SD at southern side of Admn. Bldg. including civil, internal electrification, interior works, air conditioning network and fire alarm system

The approximate estimate value has been revised from ₹ 1193.18 lakhs to ₹ 1182.78 lakhs. The other terms and conditions remains same.

For full details and tender documents please visit our website <http://www.bhel.com> vide **NIT No.: 14886** on the above mentioned dates.

Sd/-
Addl. General Manager
Factory Civil



**TENDER BOX IS AVAILABLE AT VENDOR COMPLEX NEAR
ADMN BUILDING FOR DROPPING FILLED TENDERS.**

**BHARAT HEAVY ELECTRICALS LIMITED
RAMACHANDRAPURAM : : HYDERABAD – 502032
FACTORYCIVIL ENGINEERING DEPARTMENT**

TELEPHONE NO. 040-23185059 & 040- 23182376
FAX NO. 040 – 23186122, 23186058

TENDER NOTICE NO. HY/FCD/OT-07/2013-14 DATED: 30.07.2013

Item No. 1

- 1 Name of work : Construction of office building (G+2) for PE & SD on southern side of Administration building, including civil, internal electrification, interior works, air conditioning, network and fire alarm system.
- 2 Earnest Money Deposit : ₹ 2.00 Lakhs or
(One time EMD of ₹ 2.00 Lakhs)
- 3 Approximate value of work : ₹ 1182.78 Lakhs.
- 4 Time of Completion : 16 Months
- 5 Maintenance period : 12 months
- 6 Sale of Tenders : 19.08.2013 to 10.09.2013
During 9.00 hrs to 14.00 hrs
(From the Office of AGM/Fy. Civil
Down load from BHEL web
site till the date of Receipt of
tenders.
- 7 Last date of receipt of : 11.09.2013 @ 11.00 hrs.
tenders
- 8 Date and time of opening of : 11.09.2013 @13.15 hrs.
tenders
- 9 Cost of tender documents : ₹ 500/-(if purchased from BHEL)
Including S.T ₹ 250/-(if down loaded from web)

Name & Address:

EMD PAID / NOT PAID

Signature and Seal of the Contractor



BHARAT HEAVY ELECTRICALS LIMITED

RAMACHNADRAPURAM : : HYDERABAD – 32.

TENDER DOCUMENTS

I N D E X

1. Tendering process
2. Techno Commercial bid
3. Pre-qualification
4. Scope of work
5. Techno commercial terms, conditions and special instructions.
6. Tender Notice
7. Directions to parties for Tendering
8. Tender for the work
9. Bidder's and Contractor's Certificate
10. Reverse Auction
11. General terms and conditions
12. Guidelines & statutory payments for submitting tender
13. Contractor's Obligations
14. Schedule – A : (see separate document in web and down load)
15. Schedule – B: Issue of Materials from BHEL stores
16. Schedule – C :
17. Special Conditions
18. Safety in Civil engineering works
19. Integrity Pact
20. Site safety and field quality plans
21. Layout Plans
22. Un priced bid [to be submitted along with technical bid]

ISSUING OFFICER

Signature and Seal of the Contractor

TENDERING PROCESS

A. Tender box will be kept in Vendor Complex building which is near ADMINISTRATIVE BUILDING AREA.

B. Tender documents are issued in two bid system.

1. Techno commercial bid
2. Price bid

C. Tender opening:

The tender shall be on two part bids. Only technical unpriced commercial bids shall be opened on date of opening of the bids. After scrutiny and acceptance of the technical bids, Reverse Auction will be conducted.

D. Bidders are requested to take the print of the documents on both sides of paper, to save the paper, which will save the trees.

E. The Techno commercial bid should consist of all documents as per NIT and incomplete Techno commercial bid shall be liable for rejection. In case the bidder has not satisfied all the conditions along with documentary proof, the tender will not be accepted.

F. Techno commercial and price bids must be in separate covers and super scribed as "Technical bid" and "Price Bid" separately with item no clearly written on the covers. Tenders received mixed (with price and technical bids) will not be accepted. Every page of the Technical bid and price bid documents and shall be signed and stamped by the Bidder at the bottom of the page.

G. In case of tender application and tender documents downloaded from web site, the Bidder shall pay cost of tender documents and EMD for item of work he is tendering by means of two separate DDs (in favour of BHEL), one towards cost of tender documents and second towards EMD. Both DDs shall be enclosed along with the Technical bid. DD for **cost of tender documents** may be drawn till last date of Receipt of tenders.

H. In case date of opening happens to be a holiday, by any reason, tenders will be received and opened on next working day at the same hours.

Signature and Seal of the Contractor

To be filled up by the bidder /Contractor

TECHNOCOMMERCIAL BID

Name of work : Construction of office building (G+2) for PE & SD on southern side of Administration building, including civil, internal electrification, interior works, air conditioning, network and fire alarm system.

Tender Notice No & : HY/FCD/OT-07/2013-14 Dt: 30.07.2013
Item No. : 01

S.No	Description	Data to be filled by Bidder/Contractor
1	Name of the Contractor Full Address Contractor's code No Contact person Phone , Fax Mobile Nos. Email ID	: : : : : : :
2	Details of DD/Cash receipt a) D.D or Cash receipt No.s for EMD b) DD/Cash receipt No.s for cost of tender documents . (DD/C.Rs has to be enclosed along with this bid).	: :
3	Particulars of experience/credentials as detailed in notice. (Completion certificate of works to be enclosed)	: :
4	ESI No. (Copy to be enclosed) (in case not available, proof of having applied with acknowledgement from Concerned authorities).	:
5	PF CODE No. (Copy to be enclosed)	: Pl read as per prequalification criteria
6	PAN No. (Copy to be enclosed)	:
7	VAT Reg.No: (Copy to be enclosed)	:
8	Contact Person name in case conducting Reverse Auction	:
9	Mobile no:	:
10	FAX NO	:
11	E-MAIL ID	:

Signature and Seal of the Contractor

S.No	Description	Data to be filled by Bidder/Contractor
12	LABOUR LICENCE (Copy to be enclosed if available) Valid up to : In case not available, bidder shall submit the Licence before commencement of the work.	:
13	Annual turnover during last Financial years as per pre-qualification criteria. (with supporting documents)	:
14	Service Tax No (Copy of certificate/Proof of application to be enclosed/to be submitted before release of payment)	:

NOTE:

- Without PAN ,VAT TIN No., and Service Tax Registration No.s contractors bills cannot be processed and payments will be held up.
- Technical bids will be scrutinised by the Department and in case the bidder has not satisfied all the above conditions with documentary proof, the bid will be rejected and their price bid will not be opened.
- In case of a firm, the documents shall be in the name of the firm. However in case of sole proprietor or individuals these can be on the name of the sole proprietor or individual.
- Though some of the prescribed documents of agencies are available with BHEL, in case of agencies who are presently working with BHEL, the agency shall submit one copy of the same. Else the offer will be rejected.
- All the relevant columns shall be filled with proper information. The unfinished/wrongly filled/ incomplete Tender Documents (Technical Bids /Price Bids) will be rejected.**
- BHEL reserves the right to reject any or all tenders in part or in full without assigning any reason.
- Any other works not mentioned but required for completion of the project are to be carried out by the contractor with mutually agreed rates and vetted by Finance department of BHEL.
- BHEL reserves the right to reduce/increase the items, quantities mentioned in the schedule. Bidder shall not have any claim who so ever on this account.**
- Party shall comply all legal, statutory requirements applicable to execute the work before commencement of work.**
- The agencies are advised to visit the work site to understand the nature of work /quantum of work in its true perspective to avoid any complications in future.**
- Tenders submitted without EMD / Cost of documents will be rejected.**
- All corrigenda, addenda, amendments, time extensions clarifications, etc., to the tender will be hosted on BHEL website (www.bhel.com) only. Bidders should regularly visit BHEL website to keep themselves updated.**
- The offers of the bidders who are on the banned list and also the offer of the bidder, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website.

Signature and Seal of the Contractor

PRE QUALIFICATION

- I. The following conditions have to be satisfied by the bidder, with documentary proof to be enclosed with tender bid **In case the agency fails to enclose the following documentary proof with tender the tender will be liable for rejection.**
1. Experience of having successfully completed similar works during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following:-
 - a) Three similar completed works each costing not less than the amount equal to **₹ 546.21 Lakhs**
or
 - b) Two similar completed works each costing not less than the amount equal to **₹ 682.76 Lakhs.**
or
 - c) One similar completed work costing not less than the amount equal to **₹ 1092.42 lakhs.**

Similar works: All Building construction works for commercial or Institutional or Office or Industrial buildings only shall be considered as similar works. Experience in any other works will not be considered.

- Copy of satisfactory completion certificate of contract of similar work shall be attached. Copy of the work order, Agreement and BOQ shall be submitted as support documents.
 - If the completion certificates are from private organization the same shall be supported with TDS certificate
 - The Bidders who completed the works with items issued on free of cost, the value of the same should be indicated separately. (The experience certificate value for each work considered including the cost of FREE issue materials also)
2. **Average Annual financial turnover during the last 3 years**, ending 31st March of the previous financial years of 2010-11, 2011-12 & 2012-13, should be at least **₹ 409.66 Lakhs**. Audited financial statements for the above financial years with self-attestation shall be submitted. IT saral statements shall also be submitted for the assessment years 2010-11, 2011-12 & 2012-13.
 3. **ESI code No:** Proof of certificate /having applied with acknowledgement
 4. **P F. Code No:** The agency who doesn't possess the PF code no. has to enclose an undertaking letter that they will obtain PF code no. from AP Govt. before commencement of work if they become successful bidder. (The bidders who have the PF code numbers have to enclose the proof of certificate).
 5. Labour licence from Central Government before commencement of work.
 6. PAN No. (in case not available, proof of having applied with acknowledgement from concerned authorities)
 7. **VAT registration No.:**
 - i. VAT not applicable for labour intensive works.
 - ii. If VAT applicable, APGST / TIN No: shall be enclosed. (In case not available, proof of having applied with acknowledgement from concerned authorities or an undertaking for submission of VAT registration certificate before concluding the Contract agreement). VAT registration certificate to be furnished for works costing more than Rs5.00 Lakhs each.

Signature and Seal of the Contractor

8. Service tax registration no: (in case not available, proof of having applied with acknowledgement from concerned authorities/ to be produced before release of payment).

Penalty: 0.50 % of the gross value of work executed will be levied for every week or part thereof delay by the agency subject to a maximum penalty of 10 % of gross value of the total work executed.

- II. Tenders must be submitted in sealed covers and addressed to Addl. General Manager/Fy. Civil, BHEL, Ramachandrapuram, Hyderabad 502 032. Bidder shall write tender notice No, name of work and address of the Bidder on the sealed cover (In case the bidder fails to comply any of the above, the tender will be liable for rejection) and same shall be dropped at vendor complex near Administrative building, BHEL, Ramachandrapuram, Hyderabad-502032. The postal/courier tenders are also shall be sent to above address.

III. NOTES:

- 1 Period of contract shall be as mentioned in NIT.
2. Tenders are **on two - part bid method**. (Techno commercial bid and price bid).
3. Tender documents can be had through BHEL web site <http://www.bhel.com> and the cost of document shall be paid through Demand Draft or Bankers Cheque or Pay Order and shall be enclosed along with the technical bid cover.
4. The requisitions for tender documents shall be given in person to Addl. General Manager (Projects & Factory Civil), BHEL, Ramachandrapuram, Hyderabad 502 032 along with Demand Draft/Banker's Cheque drawn in favour of "BHARAT HEAVY ELECTRICALS LIMITED, HYDERABAD" or payment of cash in BHEL Cash Office (No other mode of payment will be accepted). Tender documents shall be collected in person by the contractor or his representative.
- 5 BHEL reserves the right to reject or cancel the tender at any stage of the tender process without assigning any reasons thereof.
6. **The agencies are advised to visit the work site to understand the nature of work / quantum of work in its true perspective to avoid any complications in future.**
7. **The tender documents signed and stamped by the bidder shall be enclosed along with technical bid as a token of acceptance of all the tender terms and conditions.**

ACCEPTING AUTHORITY

Signature and Seal of the Contractor

Location of work

- South side of Existing BHEL Ramachandrapuram Administrative Main building.

Scope of work

Name of the work:- Construction of office building (G+2) for PE & SD on southern side of Administration building, including civil, internal electrification, interior works, air conditioning, network and fire alarm system.

I. Construction of PE&SD building (G+2) (Area of each floor is approximately 1900 Sq. m.)

Civil works:

- Dismantling of the sheeting, brick walls and concrete flooring of the existing buildings and preparation of site by removing the existing MS scrap, wood scrap and other garbage from the proposed area.
- The soil investigation needs to be carried out when and where required as directed by the Engineer in charge.
- Excavation of the proposed area for the laying of foundations.
- Laying of the PCC 1:4:8 for foundations.
- Laying of **RCC 1:1.5:3** for the building foundations (Raft, pedestals and columns).
- Centring and shuttering works for the slabs Ground floor, First floor and Second floor. The shuttering plates and the beam bottoms shall be properly supported with the steel span supports and jack centring/adjustable steel props.
- Concreting of the slabs with **RMC M25** concrete.
- Construction of brick walls in all floors according to the drawings provided and as instructed by the Engineer in charge.
- Plastering of all the surfaces: slabs and the brick walls.
- Supply and laying of the **vittrified tiles** of brighter shades in all floors.

Sanitation Works:

- Supply and fixing of the sanitary items that include urinary pans, cocks, wall tiles, granite flooring, GI piping of different sizes, PVC pipes etc.
- Construction of drain lines and manholes.

Interior Works:

- Supply and fixing of the **Full height glass partitions, Full/half height aluminium partitions, patch doors** with all accessories as instructed by the Engineer in charge.
- Supply and fixing of the **Wall panelling in all floors** as instructed by the Engineer in charge.

Signature and Seal of the Contractor

- Supply and fixing of the **False ceiling in all floors** as instructed by the Engineer in charge.
- Supply and fixing of the **light fittings** as directed by the Engineer in charge.

Electrical Works:

- Supply, installation, testing and commissioning of the cable race ways, Main LT Panel, UPS Out Going Panel, Lighting distribution board, Power distribution board, Computer power distribution board, Emergency lighting board.
- Supply and laying of the necessary power cables.
- Electrification works for all the floors that include chasing of walls to run electrical conduits, supply and laying of the necessary electrical cables for the electrical requirements viz lighting, 5A, 16A power points AC points etc.

Air conditioning works:

- Supply and fixing of 17TR and 2.0TR Air conditioning split AC system along with the Copper piping, Ducting, Acoustic lining, Thermal insulation, drains, Electrical connections with required cable, Pressure testing, Vacuumising and commissioning.

Fire Alarm System:

- Supply, installation, testing and commissioning of the Fire alarm system, fire detectors and other accessories.

IT Networking:

- Supply and installation of network racks, fibre cables, UPS system for backup, Patch panels, patch chords, UTP cables, information outlets etc.

Construction of Stair case Lift head:

- Civil works for the construction of elevator duct upto floor V level that include foundations, columns, brick work, fabrication and top sheeting.

Construction of Panel Room 12mx3m:

- Civil works for the construction of panel room of size 12mx3m that include excavation for foundations, concreting for foundations, columns and slabs, brick work, plastering, supply and laying of vitrified tiles, supply and fixing of aluminium door and NCL seccolor windows.

Any other miscellaneous works for completion of the above works as directed by Engineer-in-charge.

ISSUING OFFICER

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TERMS AND CONDITIONS:

CIVIL, ELECTRICAL/AIR CONDITIONING SYSTEM/FIRE ALARM & DETECTION SYSTEM:

- 1. Leakages of conditioned air, if any, in the floor after completion of works, shall be attended by the agency.**
- 2. Air conditioning agency shall prove performance of A/c system parameters of temperature etc. to the satisfaction of Engineer-in-charge apart from conditions mentioned against this system schedule.**
- 3. Fire system agency shall prove performance of the system by mock drills simulation.**
- 4. Earthing system shall be installed and commissioned confirming to IE rules as per instruction of Engineer-in-charge. Single line diagram shall be submitted.**
- 5. Power lines for computer systems, Air-conditioning and lighting distribution shall be laid without any interference.**
- 6. Civil/Electrical/AC/Fire alarm systems, individually, shall be had a guarantee period of 12 months after successful commissioning of same.**
- 7. All electrical equipments/works shall be as per IS/IE rules.**
- 8. Ducting/tubing/wiring layout for the whole AC system shall be submitted by agency for prior approval before implementation.**
- 9. All raceways shall be laid systematically with tiles without affecting the aesthetics and levels / gradation of the floor.**

ACCEPTING AUTHORITY

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TECHNOCOMMERCIAL TERMS, CONDITIONS AND SPECIAL INSTRUCTIONS

- 1 **Reverse Auction (RA)**: BHEL reserve the right to resort to Reverse Auction procedure i.e. Online bidding on internet, instead of opening the submitted sealed bid, which will be decided after technical evaluation. RA terms and condition will be intimated separately. **In case any tenderer refuses to participate in the Reverse Auction process the tender will be rejected. The EMD will be forfeited to the bidder who did not participate in the reverse auction** (The bidder should compulsorily participate by providing the Online sealed bid through internet “during the **Online initial sealed bid time**” and in the Dynamic auction the agency can participate if they are willing to continue in the auction).
- General Terms and conditions of RA are given in Annexure- AA’ for information.**
- 2 The agency shall quote (+) or (-) both in Figures and words over the BHEL estimate value given in the Price bid. In case of any difference in words and figures the percentage given in words will be considered for comparison and for awarding the work. In case Reverse Auction method not fruitful Normal tendering procedure will be followed. If more than one agency becomes L1 by quoting same value, further sealed quotations will be called for, from those L1 agencies only to decide final agency with further lowest rates. No agency shall quote more than his original tender value, while re-quoting.
- 3 **The Agency has to carry out the soil investigation test as directed by the engineer in charge and submit the report to Factory Civil department at its own expenses.**
- 4 **All electrical works have to be carried out by engaging Grade A or Grade B licensed contractor.**
- 5 If the due date of tenders opening extended because of poor response, the agencies who have already submitted tender bids earlier need not submit revised tender. The original tender only will be considered for evaluation. If the Tender is not opened on due date due to any reasons/unavoidable circumstances/the date of opening happens to be a declared holiday at a later date, the same will be opened on next working day at the stipulated time.
- 6 Bills /material proof of entry inside factory area shall be produced to the Engineer- in charge for the bought out items.
- 7 The Bidder shall accept all the terms and conditions of the techno commercial bid of the tender document. In case same is not confirmed by the Bidder, the offer will not be considered.
- 8 The Bidder shall not include any additional conditions / alter conditions either in the Techno commercial bid or Price bid.
- 9 The Bidder must visit site and familiarize with the nature of work before submitting the tender.

Signature and Seal of the Contractor

- 10 All materials of BHEL FREE issue shall be lifted by the bidder from BHEL stores and transported to worksite. The rates shall include transportation costs also.
- 11 **The agency shall sign and stamped on each page of the tender schedule issued.**
- 12 **Rates quoted shall be firm throughout the period of the contract.**
- 13 Sub contracting is not permitted under any circumstances without written consent of BHEL.
- 14 The Contract shall be closed in all respects including final measurement, recording in M book and submitting the bill within two months from the completion time as mentioned in the tender or Approved date of completion whichever is later.
- 15 M/s BHEL will not responsible for any delay or loss of tender document on transit/post.
- 16 Tenders received after due date and time shall not be considered or accepted.
- 17 In case date of opening happens to be a holiday by any reason, tender will be received and opened on next working day at the same hours.

Special Instructions:

1. All BHEL General Conditions of the Contract shall be applicable. A copy of which is already uploaded separately in BHEL website.
2. Any statutory increase in the labour wages during the period of execution shall be borne by the agency. The agency shall quote the firm rates considering the possible labour escalation also.
3. The agency should affix his signature at the end of each page of the document.
4. The rates quoted shall be finished items of work including all lifts, leads and other incidental charges mentioned in the General Conditions of the Contract, unless otherwise specified.
5. The department reserves the right to split and award the work to more than one agency.
6. **The contractor should follow all the safety precautions**, special conditions and shall comply with site safety plan attached, while executing the work. While working above 2.5 M from ground level prior permission has to be obtained from BHEL by the agency before proceeding with the work.
7. The contractor should engage labours who should not be less than 18 (eighteen) years age.
8. All the bills of contractors will be cleared by Finance Department subject to production of "Clearance Certificate" by the contractors in respect of

Signature and Seal of the Contractor

compliance of all statutory requirement, issued by I R section of Human Resource Department.

9. Those the materials including C R stones, bricks, sand and granite metal required for execution of civil works against items in the contract, are to be entered at CISF gates and supplied to site by contractor for using in works.
10. The Bidder should make fabrication detailed drawing along with BOM for fabricated structures. However BHEL will furnish sketches & design for the above.
11. Rates quoted shall be firm throughout the period of the contract and **no price escalation** is payable under this contract on any account.
12. The Bidder shall comply with all statutory requirement pertaining to the state or any government agencies or authorities Example, **PF, ESIC, workman's compensation & personnel accidents insurance**. The company will not be responsible for any claim made by the workers or government agencies / authorities.
13. Time is the essence of the contract. If agency fail to complete the work with in stipulated time, agency is liable to pay penalty as mentioned in pre-qualification criteria.
14. BHEL is an ISO 14001 & OHASAS 18001 certificate company and always strives for excellence in HSE management.
15. The samples of materials etc. should be tested in approved laboratory and reports submitted to Engineer –in charge whenever instructed and charges shall be borne by agency.
16. Agency will also ensure that qualified and experienced site staffs are available at all times during working hours in order to ensure proper supervision and to maintain the quality. Agency should take precaution regarding the safety of labour during the execution of the work. Company shall not accept responsibility for the safe keeping of your tools, tackles and materials etc., you will therefore provide and maintain at your own cost locking, watch and ward when and where necessary.
17. River sand will be allowed to use in the work.
18. **Payment terms:- Payment will be based on work % completion or mile stone basis.**
19. **Safety shoe, Uniform, masks and gloves etc.:**
Uniform-2 Pairs with stitching charges, safety shoes, gum boots, gloves, masks, helmets, summer caps etc. shall be provided by the agency to each worker. If the agency fails to provide the Safety Protective Personal Equipments, Tools & Tackels as specified above, the double the cost of the same shall be recovered from the bills.

Signature and Seal of the Contractor

Execution:

1. The Agency has to carry out the soil investigation test, as directed by the engineer in charge, and submit the report to Factory Civil department at its own expenses.
2. All electrical works have to be carried out by engaging Grade A or Grade B licensed contractor.
3. The Agency shall prepare the layouts for the Electrification, Air conditioning, lightning and other interior works and submitted for the approval of the Engineer in charge before execution of the same.
4. The Agency shall appoint one Project Manager having minimum of 10 years' experience in relevant field. One Graduate with minimum 3 years' experience in relevant field and one diploma engineer with minimum 1 year of experience in relevant field.
5. The Agency shall appoint one Safety Officer with minimum 3 years of experience in relevant field to ensure safety of the workmen.
6. The Agency shall ensure safe working conditions by providing caution banners, caution boards etc. where ever required.
7. If any material supplied by the contractor is found to be poor standards/characteristics at any stage of work or deviation for the specification provided in the LOI, the material shall be rejected and the contractor is responsible for the re-delivery of the material at his own costs.
8. The contractor shall submit two alternative elevations of the building prepared by certified architects and obtain approval from BHEL prior to commencement of work.
9. Anti-rodent measures like chemical treatment for walls and plinth before commencement of interior works, providing mesh at air conditioning openings shall be done by the agency at its own cost.
10. **Agency shall submit detailed working and scheme drawings/layouts, for the following works with technical parameters for the following and the same shall be vetted by respective concerned departments.**
 - **Air conditioning ducting**
 - **Electrical and Networking cabling/wiring**
 - **Fire detection and alarming system**
 - **Data voice/telephone**
 - **Listing/illumination**
11. **SUPPLY OF EQUIPMENT:**

Supply of complete equipment shall be done, in a sequential manner for enabling smooth execution of work. Equipment brought inside shall be under the custody of the executing agency only.

Signature and Seal of the Contractor

12. **INSPECTION IN PROGRESS AND ACCEPTANCE:**

Stage wise inspection and acceptance process shall be followed as per mutually agreed schedule between BHEL and the executing agency after award of contract.

ISSUING/ACCEPTING AUTHORITY

Signature and Seal of the Contractor

(THE AGENCIES WHO ARE NOT HAVING ONE TIME EMD WITH BHEL, R.C.PURAM, HYDERABAD WHO ARE WILLING TO PARTICIPATE IN FUTURE TENDERS WITH B.H.E.L., R.C. PURAM ARE ADVISED TO SUBMIT THIS FORM WELL INADVANCE BEFORE QUOTING THE TENDER FOR OBTAINING THE CERTIFICATE)

Request for One time EMD

To,
Addl. General Manager,
Projects and Fy. Civil,
BHEL, Ramachandrapuram
Hyderabad-502032.

Dt:

Dear Sir,

Sub: Payment of one time EMD of ₹1.00/ ₹ 2.00 Lakhs -reg.

With reference to the above subject, I am prepared to pay one time EMD of Rs 1.00 Lakh/₹ 2.00 Lakhs (Lumpsum) for quoting the works of value exceeding Rs 50.00 Lakhs/Rs100.00 Lakhs each, depending on my eligibility. I am aware that the EMD will not be released as long as I do the business with BHEL or before _____. *. whichever is later. I am aware that the EMD can't be converted into Security Deposit or it will not carry any interest. In case if I become lowest agency, I will pay security deposit separately and I will not ask for conversion into Security Deposit. In case of refusal to accept the offer after becoming lowest agency, I hereby authorise to forfeit the total money deposited under one time EMD.

In view of the above, I may be permitted to pay one time EMD of Rs1.00/2.00 Lakhs and quote for the works costing **₹ 2.00 Lakhs to ₹ 50.00 Lakhs/₹ 2.00 Lakhs to ₹ 100.00 Lakhs and above** each in the above divisions.

Thank you

Yours faithfully,

Signature of the contractor with seal.

*Note:

1. Under ONE TIME EMD exempted from payment of EMD with each tender of work costing as above.
2. The One time EMD shall be kept with BHEL for minimum period of one year.
3. The agencies not having **One time EMD** Certificate are advised to obtain the certificate well in advance i.e., two days before the due date of opening of tenders.

Signature and Seal of the Contractor

ANNEXURE – E

EFT Form (The bidders who are already having EFT details with BHEL need not fill this form and the contractor who is new to BHEL may furnish their details in the letter head of their firm duly signed and authorized by official of bank).

(Bidders to furnish this mandate on their Letter Head.)		Annexure E
		Ref No:
		Date:
To Manager/Finance-CM Bharat Heavy Electricals Limited Ramachandrapuram Hyderabad 502 032		
Dear Sir,		
Sub: Details for National Electronic Fund Transfer		
We request and authorize you to effect payment through NEFT to our Bank account, subject to RBI Guidelines, as per the details given below		
A. Sup code (As per PO/SCO) / Staffno	:	
B. Beneficiary (Name as per PO/SCO)	:	
C. PAN of Beneficiary	:	
D. TIN of Beneficiary	:	
E. e-mail address of Beneficiary	:	
F. City (of Beneficiary)	:	
G. Bank Name	:	
H. Branch (of Bank)	:	
I. A/c Number	:	
J. A/c type (Savings or Current)	:	
K. MICR Code of the branch (9 digit)	:	
L. IFSC for NEFT (11 char)	:	
M. IFSC for RTGS (If different from L)	:	
Thanking you,		
		(Signature with Seal) Authorised Signatory Name Designation
Certified that the particulars furnished above are correct as per our records		
Date	(Signature of authorized official of bank) Bank Stamp	

Signature and Seal of the Contractor



BHARAT HEAVY ELECTRICALS LIMITED
RAMACHANDRAPURAM : : HYDERABAD-32

TENDER NOTICE

No.: HY/FCD/OT-07/2013-14 Dated: 30.07.2013 Item No.1

Sealed Tenders will be received by the AGM, Factory Civil, Bharat Heavy Electricals Limited Ramachandrapuram, Hyderabad-32 at Vendor complex up to **11.00** hours on **11.09.2013** for the work of **“Construction of office building (G+2) for PE & SD on southern side of Administration building, including civil, internal electrification, interior works, air conditioning, network and fire alarm system. Factory area”**. Ramachandrapuram, Hyderabad-32.A.P. Tenders will be opened by the Bharat Heavy Electricals Limited, Ramachandrapuram, Hyderabad-32, on the date by 13.15 hours and at the place aforementioned. The Bidders or their agents are expected to be present at the time of opening of the tenders. The tender receiving officer will, on opening such tender, attest over writings or corrections, if any, therein in the presence of the tenderes who may be present at the time. The CPWD/Andhra Pradesh Detailed Standard specification and other documents relating to the contract such as additional specifications, proforma for Bank Guarantees, descriptive specifications sheets regarding materials etc., can be seen at any time between **09.00 Hrs to 14.00 Hrs** in the office for Tender forms and other particulars regarding the proposed work can be obtained on any working day from **19.08.2013** to **10.09.2013 (9.00 hours to 14.00 hours)** on payment of the prescribed sum of **₹ 500/-** per set as non-refundable(**₹ 250/-** if downloaded from web). On tender opening day also the agencies can down load the tender documents from BHEL web site till the receipt of tenders.

1. Tenders must be submitted in sealed covers and should be addressed to the Addl General Manager/Factory Civil, Bharat Heavy Electricals Limited, Ramachandrapuram, Hyderabad – 32. The name of the Bidder and the name of the work shall be noted on the cover.

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Signature and Seal of the Contractor

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If the tender is made by an individual, it shall be signed with his name and his full address. If the tender is made by a firm, it shall be signed with the co partnership name by a member or the firm, who shall also sign his own name and the name and address of each member of the firm shall be given. If the tender is made by a corporation, it shall be signed by a duly authorised officer who shall produce with his tender, the satisfactory evidence of his authorisation. Such tendering corporation may be required before the agreement is executed, to furnish evidence of its corporate existence.

2. Each Bidder must pay as Earnest Money, a sum of **₹ 2,00,000/-** only and enclose with his tender the receipt endorsed accordingly. The earnest Money prescribed for this work may be offered in any of the following forms

One time EMD/Demand Draft/ Banker's Cheque drawn in favour of "BHARAT HEAVY ELECTRICALS LIMITED, HYDERABAD" or payment of cash in BHEL Cash Office (No other mode of payment will be accepted).

The Earnest Money will be refunded to the unsuccessful Bidder after the intimation of rejection of the tenders sent. The Earnest Money will be retained in the case of the successful Bidder and get converted as a part of security Deposit for the due performance of the contract and in either case will no carry any interest. It will be dealt with as provided in the conditions attached to the tender. When a tender is to be accepted, the tender whose tender is under consideration, shall attend the Office of AGM/Factory Civil on the dates fixed by written information to him. He shall forth with upon intimation being given to him by the AGM/Factory Civil of acceptance of his tender, complete the execution of the agreement by signing all documents connected there with, Failure to do so shall entail for failure of the Earnest Money Deposit.

The contractors who are having **One time EMD** certificate shall **submit copy of the certificatetowards** exemption for payment of EMD for the work. One time EMD will not be adjusted towards Security Deposit.

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3. EMD by the Bidder will be forfeited as per Tender Document if.
 - i) After opening the tender, revokes his tender within the validity period or increased his quoted rates.
 - ii) The Bidder does not commence the work within the period as per LOI/Contract. In case the LOI / contract is silent in this regard then within 15 days after award of contract.
 4. EMD shall not carry any interest.
 5. Bidders shall peruse carefully the instructions laid in General Conditions of the contract and all other relevant documents before tendering for the work. The approximate quantity of work to be executed under each class is given in Schedule – “A”. The quantities are given with a view to enable form and for a uniform comparison of tenders. It shall be definitely understood that the Bharat Heavy Electricals Limited, does not accept any responsibility for correctness or completeness by commissions, deductions or additions at the discretion of accepting authority.
 6. The AGM/Factory Civil reserves the right to reject any tender or part thereof or all the tenders without assigning any reasons thereof.
 - 7a the Bidders not submitted in proper form or in due time will be rejected.
 - 7b The offer shall be valid for a period of **120 days + period of completion** from the date of opening of the tender.
 - 8 Security Deposit shall be collected from the successful Bidder. The rate of Security Deposit will be as below:
 - 9a Security Deposit should be collected from the successful Bidder. The Rate of Security Deposit will be as below:

Upto ₹ 10 lakhs	10%
Above ₹ 10 lakhs upto Rs 50 lakhs	₹ 1 lakh + 7.5% of the amount exceeding ₹ 10 lakhs
Above ₹ 50 lakhs	₹ 4 lakhs + 5% of the amount exceeding ₹ 50 lakhs
- The Security Deposit should be deposited before start of the work by the contractor

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9b. Security Deposit may be furnished in any one of the following forms.

- i) Cash (as permissible under the Income Tax Act)
- ii) Pay Order, Demand Draft in favour of BHEL.
- iii) Local cheques of scheduled banks, subject to realization.
- iv) Securities available from Post such as National savings Certificates, KisanVikasPatras etc.
- v) Bank Guarantee from schedules Banks / Public Financial Institutions as defined in the Companies Act subject to a maximum of 50% of the total security deposit value. The balance 50% has to be remitted either by cash or in the other form of security. The Bank Guarantee format should have the approval of BHEL. The Original bank guarantee should be sent to the BHEL directly under Registered Post(A.D).
- vi) Fixed Deposit Receipt issued by scheduled Banks / Public Financial Institutions as defined in the companies Act. The FDR should be in the name of the contractor, A/C BHEL, duly discharge on the back.
- vii) Security Deposit can also be recovered at the rate 10% from the running bills. However in such cases at least **50%** of the Security Deposit should be deposited before start of the work and the balance **50%** will be recovered from the running bills.
- viii) EMD of the successfully tender shall be converted and adjusted against the security deposit.

NOTE: Acceptance of Security Deposit against Sl. No. (iv) and (vi) above will be adjusted to hypothecation or endorsement on the documents in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

9c. Security Deposit shall not be refundable to the contractor except in accordance With the terms of the contract.

The Security Deposit will be released after completion of maintenance period.

ACCEPTING AUTHORITY

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DIRECTIONS TO PARTIES FOR TENDERING

1. A list of materials, proposed to be supplied by the Bharat Heavy Electricals Limited, Ramachandrapuram, Hyderabad – 500 032, and the places where and the prices at which they are proposed to be supplied is given in Schedule-B. BIDDER MUST ACCEPT THESE MATERIALS AT THE SPECIFIED PRICES AND QUOTE FOR FINISHED WORK ACCORDINGLY. Not with standing any subsequent change in the market remains as originally entered in the Agreement. If at any time subsequent to the execution of this agreement, materials of B.H.E.L., other than those specified in the agreement are required by B.H.E.L., to be used on the work they will be charged at issue rate of BHEL. The contractor will be informed in writing of this and he should intimate in writing the rate which he demands for finished work in view of the fact that he is to use materials of B.H.E.L., and at the issue rate. No cartage or incidental charges will be borne by B.H.E.L., in connection with the supply of materials referred to in this paragraph. If at any time, B.H.E.L., supplies materials other than those specified in the agreement at the request of the contractor for use on work, they will be charged at the market value prevailing at the time of supply or issue rate plus 12 ½% whichever is greater.
2. Subsidiary items such as water for work, clearing and marking out site, hire of tools and plants should be separately entered. If such items are not so entered, it will be assumed that the rates quoted, in the schedule include provision for them also.
3. The Bidder shall examine closely, the CPWD / Andhra Pradesh Standard specifications and also the relevant clauses of the standard preliminary specification before submitting his tender unit rates which shall be for finished work in site. He shall also carefully study the drawings and additional specifications and all the documents which form part of the agreement to be into by the accepted Bidder.
4. Each Bidder must also send a certificate of Current Income Tax Clearance from the appropriate Income Tax Authority in the form prescribed therefore. In the case of proprietary firm, it will be necessary to produce the certificate aforementioned for the proprietor or proprietors and for each of the partners as the case may be.

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5. Every Bidder is expected, before quoting his rates, to inspect the site of the proposed work. He should also inspect the quarries, and satisfy himself about the quality and availability of materials. The best class of materials shall be used on the work. In every case, the materials have to comply with the relevant standards specifications. Samples of materials as called for in the Standard Specifications, or in this tender notice or as required by the AGM (Fy. Civil) having jurisdiction for the time being over the work, herein-after called AGM (Fy. Civil) should have the due approval before the supply to site of work is begun. Attention of the contractor is directed to standard preliminary specification regarding payment of seignior age, tools etc.
6. Time shall be considered as the essence of the contract. The rate of progress as mutually agreed to is required to be maintained. Date of commencement of this program will be the date on which the site (or premises) is handed to the contractor.

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TENDER FOR THE WORK

I/We_____do hereby tender to execute works of the under mentioned description and in accordance with the conditions noted below in consideration of payment being made for the quantity of work executed at the respective rates specified in the following schedule.

I / We hereby distinctly and expressly declare and acknowledge that before the submission of my / our tender I / We carefully followed the instructions in the tender notice and have read the Andhra Pradesh Standard specification and the clauses of the preliminary specifications and that I /We have made such examination of the contract documents and of the specifications etc., and of the location where the said work is to be done and such investigation of the work required to be done and in regard to the material required to be furnished as to enable me/us thoroughly to understand the intention of same and the requirements, covenants, agreements, stipulations and restrictions contained in the contract and in the said specifications and distinctly agree that I /We will not hereafter make any claim or demand upon the Bharat Heavy Electricals Limited based upon or arising out of the said requirements, covenants, agreements, stipulations, restrictions and conditions I /We, _____ enclose a income tax verifications certificate. I /We _____ have already produced income tax verification certificate during the current calendar year in respect of (here particulars of the previous occasion on which the certificate was produced should be given _____.

Signature of Contractor (S)
Address

Signature and Seal of the Contractor

BIDDER'S AND CONTRACTOR'S CERTIFICATE

1. I hereby declare that I have perused in detail and examined closely the CPWD and its addenda volume and also BHEL General Conditions of contract. I agree to be bound by and comply with all specifications contained in Andhra Pradesh Standard Specification and General Conditions of contract, for the various items of works specified in the Schedule "A" and the work as a whole.

2. I hereby declare that I shall pay the statutory minimum wages to my workers as applicable from time to time.

I shall also adhere to all the statutory obligations under Contract Labour (Regulation and Abolition) Act 1971 and Rules framed thereunder with subsequent revisions if any.

Date _____

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REVERSE AUCTION

ANNEXURE - AA

GENERAL TERMS AND CONDITIONS OF REVERSE AUCTION (RA)

Against this enquiry for the subject item/system with detailed scope of supply as per enquiry specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e. ONLINE BIDDING (THROUGH A SERVICE PROVIDER)

- (i) For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- (ii) BHEL will engage the services of a Service Provider who will provide all necessary training and assistance/demonstration before commencement of on line bidding on internet.
- (iii) BHEL will inform the Vendors in writing the details of Service Provider to enable them to contact for training demonstration.
- (iv) Business rules like event date, time, start price, bid decrement, extensions etc. also will be communicated through Service Provider for compliance.
- (v) Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse Auction. Without this, the vendor will not be eligible to participate in the event.
- (vi) BHEL will provide the calculation sheet (e.g. EXCEL sheet) which will help to arrive at "Total cost to BHEL" like schedule of items rates, inclusive of all taxes and duties except service tax which is extra as applicable for each of the vendor to enable them to fill in the price and keep it ready for keying in during the Auction.
- (vii) Reverse auction will be conducted on a scheduled date & time.
- (viii) At the end of Reverse Auction event, the lowest bid value will be known on the network.
- (ix) The lowest bidder has to fax/e-mail the duly signed filled-in prescribed format as provided to BHEL through Service Provider within 24 hours of Auction without fail.
- (x) Any variation between the on-line bid value and the signed document (price bid) will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL as per prevailing procedure.
- (xi) **The discount offered by the L1, through the result of dynamic Reverse Auction is applicable on all item rates of the schedule of items of price bid.**
- (xii) BHEL reserves the right to negotiate if needed with L1 vendor of the Reverse Auction.
- (xiii) In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.
- (xiv) **The agencies are advised to keep a copy of the Price bid submitted along with tender for their reference for providing at the time of online sealed bid value.**

ISSUING OFFICER

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TERMS AND CONDITIONS FOR REVERSE AUCTION

- 1. LOG IN NAME & PASSWORD:** Each Bidder is assigned a Unique User Name & Password by **Service provider**. The Bidders are requested to change the Password and edit the information in the Registration Page after the receipt of initial Password from **Service provider**. All bids made from the Login ID given to the bidder will be deemed to have been made by the bidder.
- 2. BIDS PLACED BY BIDDER:** The bid of the bidder will be taken to be an offer to execute the work. Bids once made by the bidder cannot be cancelled. The bidder is bound to execute the work as mentioned above at the price that they bid. Should any bidder back out and not make the supplies as per the rates quoted, BHEL and / or **Service provider** shall take action as appropriate.
- 3. LOWEST BID OF A BIDDER:** In case the bidder submits more than one bid, the lowest bid will be considered as the bidder's final offer to execute the work
- 4. AUCTION TYPE:**
 - 1) Sealed bid Reverse Auction / Initial Auction.
 - 2) Online English Reverse (No Ties) Auction.
- 5. DURATION OF AUCTION** The duration of Auction will be for 60 Minutes. If a bidder places a bid in the last 5 minutes of closing of the Reverse Auction and if that bid gets accepted, then the auction's duration shall get extended automatically for another 5 minutes, for the entire auction (i.e. for all the items in the auction), from the time that bid comes in. Please note that the auto-extension will take place only if a bid comes in those last 5 minutes and if that bid gets accepted. If the bid does not get accepted, the auto-extension will not take place even if that bid might have come in the last 5 minutes. In case, there is no bid in the last 5 minutes of closing of Reverse Auction, the auction shall get closed automatically without any extension. However, vendors are advised not to wait till the last minute or last few seconds to enter their bids during the auto-extension period to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc. (THIS SCHEDULE IS TENTATIVE. IN CASE OF CHANGE IN SCHEDULE, THE SAME SHALL BE COMMUNICATED TO YOU).
- 6. BID DECREMENT:** The minimum Bid decrement shall be available to the Bidders at the time of the Reverse Auction. The bidder can view the same by clicking on the Item details at the start of the auction. The bidder can bid lower than the Lowest Bid in the auction by a decrement/multiples of the minimum Bid decrement. Also please note that the start price of an item in the on line reverse auction is open to all participating bidders. Any bidder can start bidding in on line reverse auction, from the start price itself. If the start price is your own on line initial sealed bid price, you still need to bid in the on line reverse auction. More over please note that the first on line bid that comes on the system during on line reverse auction can be equal to on line auction's start price, or lesser than auction's start price by one or multiples of decrement . The second on line bid and onwards will have to be lesser than the L1 rate by one decrement value, or by multiples of the decrement value.
- 7. VISIBILITY TO BIDDER:** The Bidder shall be able to view the following on his screen along with the necessary fields during English Reverse –No ties Auction:
 - a. Leading Bid in the Auction
 - b. Bid Placed by him
 - c. His Own Rank
 - d. Start Price & Bid Decrement Value

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- 8. AUCTION WINNER:** At the end of the Reverse Auction, BHEL will evaluate all the bids submitted and will decide upon the winner.
- 9. PROXY BIDS:** Proxy bidding feature is a pro-supplier feature to safe guard the supplier's interest of any Internet failure or to avoid last minute rush. The Proxy feature allows Bidders to place an automated bid against other Bidders in an auction and bid without having to enter a new amount each time a competing Bidder submits a new offer.

The bid amount that a Bidder enters is the minimum that the Bidder is willing to offer. Here the software bids on behalf of the supplier.

- The proxy amount is the minimum amount that the Bidder is willing to offer. During the course of bidding, the Bidder cannot delete or change the amount of a Proxy Bid.
- Bids are submitted in decrements (decreasing bid amounts). The application automates proxy bidding by processing proxy bids automatically, according to the decrement that the auction originator originally established when creating the auction, submitting offers to the next bid decrement each time a competing Bidder bids, regardless if competing bids are submitted as proxy or standard bids. However it may please be noted that if a manual bid and proxy bid are submitted at the same instant manual bid will be recognised as the L1 at that instant.
- This feature can be used only once during a particular Reverse Auction and only after the L1 rate is equal to or less than the minimum bid amount that the bidder has put in the system will he get the option to manually bid for the same. In no case during the bidding till the L1 rate or less is not reached as equivalent to the minimum bid amount offered by the bidder, will the bidder get the option to manually bid for the same.
- **NOTE : In the event of a tie between the proxy bid (automated bid) and manual bid , the manual bid stands accepted and proxy bid stands rejected vendors to note the same**

10. GENERAL TERMS & CONDITIONS: Bidders are required to read the "Terms and Conditions" section of the auction website (**Service provider**) using the Login IDs and passwords given to them.

11. OTHER TERMS & CONDITIONS:

- The Bidder shall not involve himself or any of his representatives in Price manipulation of any kind directly or indirectly by communicating with other suppliers / bidders.
- The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
- BHEL's decision on award of Contract shall be final and binding on all the Bidders.
- If BHEL is not satisfied with the outcome of Reverse auction, BHEL is free to re conduct the reverse Auction.

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- BHEL along with **Service provider** can decide to extend, reschedule or cancel any Auction. Any changes made by BHEL and / or **Service provider** after the first posting shall be deemed to have been accepted if the Bidder continues to access the portal after that time.
- **Service provider** shall not have any liability to Bidders for any interruption or delay in access to the portal irrespective of the cause.
- **Service provider** is not responsible for any damages, including damages that result from, but are not limited to negligence.
- **Service provider** will not be held responsible for consequential damages, including but not limited to systems problems, inability to use the system, loss of electronic information etc.

N.B.

- All the Bidders are required to submit the Process Compliance Form (**Annexure-II**) duly signed to **Service provider** by XXXXXXXX after the receipt of the Process Compliance Form; Log in ID & Password shall be allotted to the suppliers (bidders).
- After the completion of the Auction event, successful bidder has to submit the Prices in the **Annexure-III** immediately to **Service provider** for further proceedings.

Note: Name of the Service provider will be intimated before conducting reverse auction by BHEL.

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ANNEXURE –II**Process Compliance Form**

(The bidders are required to print this on their company's letterhead, sign & stamp before faxing)

To,
(Name of the service provider)

Dear Sir,

This has reference to the Terms & Conditions for the Reverse Auction mentioned in the RFQ (Tender Enq. No. HY/FCD/OT-07/2013-14 Dt: 30.07.2013, Item no: 1) document for the work of "Construction of office building (G+2) for PE & SD on southern side of Administration building, including civil, internal electrification, interior works, air conditioning, network and fire alarm system".

This letter is to confirm that:

- 1) The undersigned is the authorized representative of the company.
- 2) We have studied the Commercial Terms and the Business rules governing the Reverse Auction as mentioned in your letter and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the auction tool and have understood the functionality of the same thoroughly.
- 4) We confirm that we will enter the price in RA portal, which should be same as already submitted in Hard copy to BHEL in sealed bid.
- 5) We have noted that, in case of prices quoted in dynamic bid is higher than the prices submitted in seal bid, the difference shall be reduced from the final reverse auction price. We will accept order at that reduced price.
- 6) We have noted that BHEL shall take action as appropriate, in case we do not enter the same price as already submitted in Hard copy to BHEL in sealed bid.
- 7) We have noted that incase BHEL resorted to re-tendering, due to clause 6 of business rule for price discrepancy, the work shall be done from the some other sources at our Risk & Cost.
- 8) We also confirm that we will fax the price confirmation & break up of our quoted price as per **Annexure III** besides sending the same by courier both to M/s. BHEL and **Service provider**.

We, hereby confirm that we will honor the Bids placed by us during the auction process.
With regards

Signature with company seal

Name	–
Company / Organization	–
Designation within Company / Organization	–
Address of Company / Organization	–

Scan & email this document: Service provider

Signature and Seal of the Contractor

Annexure III
Price Confirmation

(To be submitted by the bidder on their Letterhead, duly stamped & signed after the completion of the Reverse Auction)

To,
(Name of the service provider)

Sub: Final price quoted during online reverse auction and price break-Up with Taxes and duties.

Tender Enq. No. HY/FCD/OT-07/2013-14 Dt: 30.07.2013 for “Construction of office building (G+2) for PE & SD on southern side of Administration building, including civil, internal electrification, interior works, air conditioning, network and fire alarm system”.

Dear Sir,

We confirm that we have quoted a total contract value for an amount of Rs. _____ .i.e. (cost to BHEL) as per the format provided by BHEL at Annexure-IV as our final lump sum prices during the Reverse Auction conducted today. The break-up will be as per Annexure-IV.

Thanking you and looking forward to the valuable order from BHEL.

Yours sincerely,

For _____

Name :
Company :
Date :
Seal :

Signature and Seal of the Contractor

GENERAL TERMS & CONDITIONS

The contractor shall comply with the following general terms conditions and special instructions.

1. COMPLETION CERTIFICATE:

Completion certificate shall be issued by BHEL after completion of all supplies, drawings and documents and satisfactory commissioning of the systems as per purchase order/work order.

2. FINAL DRAWINGS AND DOCUMENTS:

Agency shall submit the complete set of final "as built" drawings/documents in 3 sets, before submission of final bill. There shall include, "as built" drawings of Civil, Electrical, Air conditioning, Network, Fire Detection system, Communication, Ducting, termination details along with routing of raceways.

3. SAFETY:

All operation of the executing agency during execution stage shall be as per factory rules. Further, all safety norms shall be followed by the executing agency while executing the contract and BHEL shall in no way responsible for any mishap or untoward incident. Personal protective equipment is mandatory for the workmen engaged during execution of work.

10. GUARANTEE:

All works shall be guaranteed for 12 months after completion certificate is issued by BHEL. During the guarantee period, any equipment / items which develops problems or becomes non functional shall be freely replaced.

1. The contractor shall fully comply with the following enactments:
 - a. Contractor Labour (R&A) Act, 1971.
 - b. Wage Rates not less than that notified by State Labour department from time to time.
 - c. Payment of Wages Act.
 - d. ESI Act, 1948.
 - e. EPF Act, 1952.
 - f. Workmen's Compensation Act, 1923.
 - g. The company's instructions as issued from time to time in regard to working hours, wages, leave, holidays etc.
2. The Contractor shall obtain license from the Assistant Labour Commissioner (Central), or appropriate Government if he engages 20 (Twenty) or more workmen only.

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3. The contractor shall produce the following Registers and forms before commencement of work, verification by the Executing Officer of the company.
 - a. Form XIII - Register of workmen employed by contractor (Rule 75).
 - b. Form XIV - Employment card issued by contractor (Rule 76).
 - c. Form XVI - Muster Roll (Rule 78 (1) (a) (i)).
 - d. Form XVII - Register of Wages (Rule 78 (1) (a) (i)).
 - e. Form XVII - Register of wages - cum Muster Roll (in case of weekly payment).
 - f. Form XIX - Wage slip (Rule 78 (b)).
 - g. Form XX - Register of deduction for damages or loss (Rule 78 (1) (a) (ii)).
 - h. Form XXI - Register for fines (Rule 78 (1) (a) (ii)).
 - i. Form XXII - Register of advances (Rule 78 (1) (a) (ii)).
 - j. Form XXIII - Register of overtime (Rule 78 (1) (a) (iii)).
 - k. Form XXIV - Register to be sent by the contractor to licensing officer (Rule 82) (1).

The contractor shall maintain the above neatly, completely and legibly for inspection by various statutory authorities and the company officials even at short notice.

5. The contractor shall observe
 - (a) Weekly rest day.
 - (b) The company list of holidays.
6. Contractor shall obtain complete bio-data of the labour, employment certificate and Antecedent verification in the prescribed form for each labour and supervisor engaged by him and shall submit the same to the Personnel Department / IR section through the contract executing officers before commencement of the work.
7. The Entry permits are to be issued to the Contract Labour by Assistant Commandant / CISF (Plant), based on the requisition submitted by Contract Executing Officer and forwarded by Dy. General Manager / Personnel.
8. Every contractor shall submit a notice regarding commencement and completion, of work in form – VI A&B [Rule 25 (VIII) & 81 (3)] to Personnel Department, IR section through his contract executing officer, for forwarding the same to State Labour Department.
9. The contractor shall make himself or his representative available at the work spot everyday during execution of work, for effective supervision.
10. The contractor shall attend to all inspections notified / conducted by the Personnel Department, Labour Department, P.F. authorities. Factory Inspectors ESI Inspectors or any other such authorities under the act.
11. Non – compliance of any provisions under the act/ rule/instructions / guidelines shall make the contractor liable for penal action including termination of contract.

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Signature and Seal of the Contractor

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12. Contractor shall furnish in a separate letter his place of residence and postal address. The delivery at the above named place or posting in a Post box regularly maintained by the post and telegraph Department or sending letters registered for acknowledgement of any notice, letter or other communication to the contractor. Change in address shall come into force at any time by an instrument executed by the contractor and delivered to the Company official who has signed the contract.
13. The contractor must satisfy himself by personal study and examination of the drawings / specifications furnished and understand thoroughly the scope of proposed work in detail and all conditions affecting the work before entering into the contract. There shall not be at any time dispute / complaint of any misunderstanding with regard to scope of work and interpretation of specifications or any misunderstanding with regard to nature or omission of the work to be done not shall any application for compensation in terms of time and money shall be accepted by company regarding the above.
14. Contractor shall in his absence keep competent agent constantly on the works and any directions or explanations given by the "Contract Signing Officer" or his representative to such agent shall be held to have been given to the contractor himself.
15. Contractor on the advice of company official shall immediately remove any person employed by him, who may in the opinion of the company official is incompetent or misc. conducts himself and such persons shall not be again employed on the works without permission of the company official.
16. The contractor shall erect and maintain at his own cost temporary weather proof sheds at such places approved by the company for keeping materials under cover.
17. The contractor shall give all notices required by the acts regulations , bylaws, legal acts and pay all fees in connection therewith unless and otherwise arranged and decided in writing with the company. He shall also ensure that no attachments are made against materials or work forming part of or for the use of the contractor. In all such cases, contractor shall protect and indemnify the company against any claim or liability arising from or based on the violation of any such laws, ordinances, regulations ,orders, decrees or attachments either by himself or by his employees,
18. It shall be contractor's sole responsibility to protect the public and his employees against accident from any cause and provide required safety equipments and shall indemnify, the company against any claims for damages for injury to the person or property resulting from any such accidents and shall, where the provisions of the workmen's compensation act apply, take steps to properly insure against any claims thereunder.

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19. In the event of any accident in respect of which compensation may become payable under the workmen's compensation act VIII of 1923 whether by the contractor or by the company as principle employer, it shall be lawful for the company to retain out of monies due and payable to the contractor such sum or sums of money as may, in the opinion of the company shall be final in regard to all matter arising in this clause.
20. No work shall be done on Sundays or on other declared holidays of the company without the written permission of the company officer in charge of the work. The contractor shall comply with the provisions of the Factories Act Rules framed there under if the same are applicable.
21. The contractor shall keep his work place clean and safe to avoid injuries to men and damage to finished products / equipments.
22. On the occurrence of an accident, which results in the death of any of the workmen employed by the contractor or which is so serious as to be likely to result in the death of any such workmen, the contractor shall within 24 hours of the happening of such an accident intimate in writing to the company official in charge of the work.
23. The contractor shall indemnify the company against all losses or damages sustained by the company resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or dues if any and become payable by the company, as a consequence of failure, the company to give notice under the workmen's compensation act or otherwise confirm to the provisions of the said act in regard to such accident.
24. The contractor shall ensure adherence to all statutory requirements applicable to BHARAT HEAVY ELECTRICALS LIMITED, RAMACHANDRA PURAM, HYDERABAD-502032.
25. The contractor shall ensure abidance by all the labour laws especially including contract labour (R &A) Act, payment of wages Act, workmen's compensation act, minimum wages Act ESI Act and Provident Fund Act as amended from time to time.
26. The contractor shall comply with provident Fund Act either through PF code allotted to him are by the code provided by PF Department to work Centers in the FACTORY /TOWNSHIP CIVIL OF B.H.E.L. Ramachandrapuram, Hyderabad -502032
27. Notwithstanding the clause, in case of any financial loss incurred by the company on account of contravention of the Provident Fund regulations or any regulations of rule touching the same by the contractor, the contractor shall submit an undertaking to indemnify the company to the extent of the loss incurred by the company.

Contd....4

Signature and Seal of the Contractor

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28. The contractor should engage only those labourers who shall be more than 18(eighteen) years of age.
29. The contractor shall not resort to sub-contracting under any circumstances .If found at a later date, BHEL reserves the right to take action what ever action it deems fit , including cancellation of the contract.
30. Contractor shall issue "Employment Card" as per statute to all the labour and supervisors covered under the job work contract.
31. The contractor shall be responsible to settle any grievances of the labour deployed by him.
32. Whenever the term "CONTRACTOR" is used, it shall be understood to refer to the particular person, firm or corporation with whom an agreement has been made by the concerned company official for executing the work defined in the concerned agreement and for the purpose of instructions regarding compliance with contract conditions, it shall include the contractor's authorised agents, who are entrusted with the work by contractor.
33. The quantities mentioned in the agreement schedule are worked out from the relevant drawings in the company and may not be the actuals required for execution. The company does not expressly or by implication agree that the actual amount of the work to be done shall correspond there with, but reserves the right to increase or decrease the quantity of any class or portion of the work as he deems necessary.
34. All the works shall be carried out in accordance with the directions and to the satisfaction of the company official in accordance with the drawings, specifications and instructions. Supplementing or explaining the same as may from time to time shall be done by the company official.
35. For all modifications, omissions or additions to the approved drawings and specifications, the company shall issue revised plans or written instructions and no modifications, omission or addition shall be made unless at any time before completion of the work.
36. The company shall have the privilege of ordering modifications, omissions, or additions at any time before completion of the work.
37. All materials, articles, and workmanship shall be the best of their respective kinds for the class of work described in the contract specifications and schedule and materials to be obtained by the contractor shall be from sources approved by the company.
38. Sample of materials shall be furnished by the contractor at his expense to the company when called for before execution of any work.

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Signature and Seal of the Contractor

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39. The company shall have power to reject at any stage, any work which is considered to be defective in quality of materials of workmanship and shall not be debarred from rejecting wrong material by reasons of having previously passed them in an un worked condition. Any portion of the work or materials rejected or pronounced to be inferior or not in accordance with specifications shall be taken down and removed from the work site at the contractor's expenses.
40. The decision of the company shall be final and binding on the contractor on all technical questions which may arise in the contract with respect to material, workmanship, removal of improper work, interpretation of the working drawings, specifications, notes, procedures etc.
41. The decision of the "Contract Signing Officer" or any officer deputed by him duly authorised on his behalf, in respect of the rate of progress and the quality of work or material shall be final.
42. Contracts shall be deemed to have included in his tender price of all the plant, Machinery and appliances required for the purpose of all operations connected to secure a satisfactory quality of work within the opinion of the company and to ensure the completion of the work within the time specified.
43. If at any time, during the progress of work or any part of it such methods or equipment appear to the company official to be insufficient or inappropriate for ensuring the quality of work required or rate of progress, he may order the contractor to increase their efficiency or to improve their quality of work and the contractor shall comply with such order and on failure of which the company may take such action as it deems fit to improve the quality of work or the rate of progress required from the contractor and all such actions taken by the company shall be at the cost and risk of the contractor.
44. It is open to the company to lend or supply to the contractor any tools, implement, material and machinery that are needed by the contractor, which in the opinion of the company is essential to improve the quality or progress of work. The contractor shall pay such deposit or charges that may be fixed or determined by the company for any such articles or machinery lent or hired to the contractor.
45. Any electric power required for contractor's machinery for the purpose of work shall be supplied by the company at the written request of the contractor at one point subject to the observance of rules and regulations of Electric board / company and charges there on shall be recovered from the contractor.
46. The contractor shall confirm to the regulations and laws of central / state govt. or any local authority and that of the company with whose system the machinery is supposed to be connected.

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Signature and Seal of the Contractor

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47. All rubbish as it accumulates shall be removed from the site to the point of disposal as indicated from time to time by the company. If this is not adhered to, the company shall remove the scrap and recover the cost of these operations from the bills of the contractor.
48. Any sum due from the contractor on account of tools and plants, stores, or any other items provided by the company shall be deducted from the respective bill due to him.
49. In case of breach of any of the terms and conditions of the contract, a claim shall be lodged under the bank guarantee with the guarantor at the discretion of the competent authority of the company. On successful completion of the contract to the satisfaction of the company, the bank guarantee shall be released after due claim period.
50. In the event of any question or dispute or under this contract, the same shall be referred to a competent Authority in the company for sole arbitration and his decision shall be final and binding on the parties to the contract.
51. In case of any suit or other legal proceeding arising under this contract, the courts at Sangareddy (Medak Dist.) A.P only shall have the Jurisdiction.
52. The company reserves the right to enter into parallel agreement with one or more contractor at their direction.
53. Disputes, grievances between the contractor and his labour, will have to be settled by the contractor only.
54. The labour employed by the contractor, if found in abetting and fellow labour or contractors or any BHEL employee, the same shall be considered as an act of indiscipline. Such laborers shall be removed from the services of the contractor, on the advice of BHEL. Further the contractor shall initiate every necessary action in accordance with the relevant Laws, Rules & Regulations and enactments of State and Central Government.
55. Wherever, BHEL/COMPANY standards are mentioned, copies of which are enclosed, shall be strictly followed.
56. Nothing contained in the contract agreement and its conditions shall be deemed to preclude or render inoperative the service of any notice, letter or other communication upon the contractor personally.
57. The decision of the "Contracting Signing Officer" shall be final and binding on the contractor on all technical questions which may arise touching the contract with respect to the quality of material, workmanship, removal of improper work, interpretation of the working drawings, specifications, notes, procedures etc.

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Signature and Seal of the Contractor

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58. BHEL shall have the privacy of the contract with the contractor only and will give instructions to the contractor or his authorized representatives. BHEL will have nothing to do or be concerned with the employment of employees working for the contractor. The relationship between BHEL and the Contractor will be that of independent entities and nothing herein contained will amount to joint venture, partnership or an employer-employee relationship.
59. The contractor shall maintain regular contact with the designated employee(s) of BHEL and will interact on matters relating to the work awarded under this contract.
60. In case the contractor does not carry out the Contractual / Statutory obligations or the services rendered by him are found to be unsatisfactory, BHEL shall bring the same to his notice and he will be obliged to discharge the obligations and rectify the deficiency/ normally within three days' time failing which, BHEL reserves the right to terminate the contract without assigning any reason whatsoever. In such an event, no damages will be payable for short closure of the contract.
61. The contractor shall deposit an amount of Rs. _____ as security with BHEL in the form of pay order / bank guarantee / FDI in the name of contractor A/c.- BHEL duly discharged on the back. Alternatively, the amount of security deposit can be adjusted partly from EMD and balance amount from subsequent bills. This security deposit shall be liable to be returned to the contractor after termination of the contract or at the end of it, subject to deduction on account of company dues, non-deposit of statutory dues etc. No interest shall be payable on the security deposit.
62. The decision of BHEL regarding interpretation of any terms and conditions set forth in this agreement shall be final and binding on the contractor.
63. Any matter arising out of or in connection with the agreement shall be under jurisdiction of SangaReddy Court.
64. Notwithstanding anything contained in this Agreement, the contract may be terminated by BHEL without assigning any reason thereof by giving a notice of 30 days to the contractor.
65. The contract will commence on _____ date and will remain valid till _____ date. The parties reserves the right to extend the contract on mutually agreed terms and conditions.

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Signature and Seal of the Contractor

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66. All disputes arising in connection with the contract shall be settled by mutual consultation. If no agreement is reached the dispute shall be settled in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the rules made there under. The dispute shall be referred for arbitration to any arbitrator to be appointed by the Head of the unit. The award of the arbitrator shall be final and binding on both the parties. The venue of the Arbitration shall be Hyderabad in India. The Award to be given by the Arbitration shall be speaking award. All questions, disputes, differences arising under, out of or in connection with this contract shall be to the exclusive jurisdiction of Sanga Reddy Courts.

Signature and Seal of the Contractor

Guidelines and statutory payments to Contract work force for submitting tenders for Civil Works as per Circular issued by BHEL.

Daily wage rate is exclusive of Holiday and Leave Wage.

Wage rates as on date i.e. 01.04.2013

U S W	:	₹ 377.65	per day Inclusive of weekly off.
S S W	:	₹ 413.30	" "
S W	:	₹ 448.42	" "

Leaves and Holidays

- + 12 days paid holidays / per year
- + 18 paid leaves / per year.

i) P F and E S I contributions wages

PF @ 13.61 % inclusive of administrative charges @1.61% and ESI @ 4.75% of basic wages should be contributed by the contractor on above daily wages and payment of Minimum Bonus under the Bonus Act 1965.

The contractors are advised to quote the rates considering the above statutory payments and also future increase in wage rate of contract work force. BHEL will not pay any escalation charges in minimum wages during the contract period.

ISSUING/ACCEPTING AUTHORITY

Signature and Seal of the Contractor

Note:

1. The quantities shown above are approximate and liable for variation.
2. All BHEL General Conditions of the Contract shall be applicable.
3. Any statutory increase in the labour wages during the period of execution shall be borne by the agency.
4. The agency should **affix his signature at the end of each page of the document with Rubber Seal**
5. The rates quoted shall be of finished items of work including all lifts, leads and other incidental charges, inclusive of all taxes and duties mentioned in the General Conditions of the Contract, unless otherwise specified.
6. The department reserves the right to split and award the work to more than one agency.
7. The contractor shall submit the daily progress report to the Engineer-in-charge.
8. All the bills of contractors will be cleared by Finance Department subject to production of "Clearance Certificate" by the contractors with respect to the compliance of all statutory requirement, issued by I R section of Human Resource Department.
9. All the materials brought inside are to be entered at CISF gates and supplied to site by contractor for using in works.

ACCEPTING AUTHORITY.

Signature and Seal of the Contractor

Special Instructions**Tendering:**

1. If an individual makes the tender, it shall be signed with his full name and his address shall be furnished. If it is made by firm, it shall be signed with the co-partnership name by a member of the firm, who shall also sign his own name, also furnish the name and corporation, it shall be signed by a duly authorised officer who shall produce with the tender, satisfactory evidence of his authorisation. Such tendering corporation / firm is required to furnish evidence of its existence along with bid.
2. The EMD will be refunded to the unsuccessful Bidders on application after rejection of the tender is intimated. The earnest money will be retained in the case of the successful Bidders and either of the cases will not carry any interest. It will be dealt with as provided in the conditions attached to the tender.
3. Whenever a tender to be accepted, the Bidder, whose tender is under consideration, shall attend the office of "Office Inviting the Tender" on the date fixed by written intimation to him. He shall forthwith, upon intimation being given to him by the "Officer Inviting the Tender" [Ex. AGM (FCD)] for acceptance of his tender, complete the execution of the agreement by signing all documents connected therewith. Failure to do so and not to commence the work within one month from the date of intimation shall entail forfeiture of the earnest money.
4. Bidders shall peruse carefully the instructions and directions to parties in tendering and the conditions of the agreement and all other relevant documents before tendering the rates for the work. The approximate quantity of work to be executed under each class is given in the schedule. The quantities are given with a view to enable Bidder to quote his overall rate for each class of work in the tender form and for an uniform comparison of Bidders. It shall be definitely understood that BHEL does not accept any responsibilities for the correctness or completeness of this schedule and that the schedule is liable to alterations by omission deductions, or additions at the discretion of accepting authority.
5. The Bidder shall keep the offer valid for a period of 120 days + period of completion from the date of opening of tender. It is being understood that the tender documents have been sold / issued to the Bidder and the Bidder is being permitted to tender in consideration of the stipulation on his part that after submitting the tender, he will not recall his offer or modify the terms and conditions thereof in a manner not acceptable to the "Officer Inviting the Tender" Should the Bidder fail to observe or comply with the foregoing stipulation, the EMD shall be forfeited.
6. Bidders have to quote their rates in the tender schedule legibly written in figures and words and those not submitted in proper form are liable for rejection.
7. The submission of tender shall be strictly in accordance with the terms and conditions stipulated in this tender notice. No counter conditions will be acceptable or valid.

Signature and Seal of the Contractor

8. The Bidders must satisfy themselves by personal study and examination of the drawings / specifications furnished and understand thoroughly the scope of proposed work in detail and all conditions affecting the work before entering into the contract. There shall be no dispute/ complaint or any nature regarding the scope of work and interpretation of specifications or any misunderstanding with regard to nature or omission of the work to be done nor shall any application for compensation in terms of time and only shall be accepted by BHEL in regard to the above.
9. Contractor shall be deemed to have included in his tender price of all the plant, machinery, all taxes, duties applicable and appliance required for the purpose of all operations connected with the work embraced under the contract to secure a satisfactory quality of work and rate of progress which in the opinion of the "Contract Signing Officer" will ensure the completion of the work within the time specified.
10. The contractor has to produce the bank guarantee in the prescribed proforma valid for the contract period for a value calculated at the rates mentioned towards security deposit. The claim period under the guarantee shall be valid for six months after expiry of the contract.
11. This is a time bound contract for period mentioned, and does not envisage any escalation of price.
12. The rates quoted by the contractor shall be firm for the contract period. There shall be no revision in contract rates due to increase in any statutory levies during the period of the contract and this increase shall be absorbed by the contractor himself in full.

ACCEPTING AUTHORITY

Signature and Seal of the Contractor

CONTRACTOR'S OBLIGATIONS**I) CONTRACTURAL:**

- a) Contractor shall deploy the minimum number of work force as specified by the department.
- b) Contractor shall supervise the work allotted to him and to be carried out by his employees.
- c) Contractor shall ensure that the employees deployed in the premises of BHEL are physically and mentally fit and do not have any criminal record. Such employees should possess requisite skill, proficiency, qualification, experience etc.
- d) Contractor shall maintain appropriate records of his employees deployed to carry out the job(s).
- e) Contractor should issue appropriate letters to his employees.
- f) Contractor shall provide employment card/identity card with photograph duly verified and attested by the Contractor to his employees. Contractor shall indicate the name of the proprietary/partnership firm/company, place of work, contract number and duration of validity of card.
- g) Contractor will be responsible for the good conduct of his employees. In case of any misconduct/ misbehavior by any employee, the contractor will replace such employee(s) immediately.
- h) Contractor shall ensure that the job is executed through his employees on his rolls and under no circumstances the contractor will deploy any casual employee to carry out the job nor shall sub-contract the job without prior written permission.
- i) Contractor shall keep watch on his employees and he will be liable for any pilferage / loss to BHEL due to acts of omission and commission by his employees. Similarly, liability for any compensation to outsiders on account of any act of omission and commission by the employees deployed by the contractor shall lie exclusively with him.
- j) Contractor shall to provide safety appliances and safety shoes to his employees. The contractor shall be responsible for enforcing all safety regulations as applicable.
- k) The contractor has to provide a distinct uniform different from BHEL employees. The uniform should have logo of the contractors firm / company. The uniform shall be kept in neat, tidy and wearable condition. Whenever necessary, the cap shall be integral part of the uniform.
- l) Contractor shall to ensure that all precautions are taken for safety of his employees and equipments.

Signature and Seal of the Contractor

- m) In the event of termination of contract for any reason whatsoever, the contractor shall withdraw all his employees from the establishment of BHEL. In case contractor decides to terminate services of his employees, he should settle all terminal dues including retrenchment compensation.
- n) Contractor shall provide to his employees all tools, tackles and equipment's and maintain the same to carry out the job under the contract at his cost and if necessary contractor may take insurance policy of his men, material, equipment's and tools and tackles.
- o) Contractor shall provide safety appliances and maintain the same at his own cost which may be required under the statute or otherwise.
- p) Contractor shall provide material at his cost mentioned in the contract to his employees for carrying out the job.

II) TOWARDS STATUTORY LIABILITY

- a) All statutory requirements under Minimum Wages Act, 1948, Payment of Wages Act, 1936, Workmen Compensation Act. 1923, EPF & MP Act, 1952, Payment of Gratuity Act, 1972, ESI Act, 1948. The Contract Labour (R&A) Act, 1970, Payment of Bonus Act, 1965, Income Tax Act, Service Tax Act and all other applicable Acts shall be complied with by the contractor.
- b) Contractor shall comply with all statutory requirements, rules, regulations, notifications in relation to employment of his employees issued from time by the concerned authorities.
- c) Contractor shall ensure payment of statutory prescribed minimum wages as applicable from time to time in the presence of authorized representative of BHEL and maintain proper records of their timely disbursements. These records need to be preserved for a period of at 3 years and should be made available even after the contract is over for any verification by the statutory authorities / BHEL authorities.
- d) Contractor to provide PF pass book to his employees and ensure payment of PF, EDLI, pension dues under EPF & MP Act, 1952 to the PRFC.
- e) Contractor shall ensure payment of ESI contribution under ESI Act, 1948 and provide ESI membership No. / card of each employee.
- f) Contractor shall produce proof of deductions as well as remittances of PF, EDLI, Pension, ESI contribution, administrative charges etc. wherever applicable and shall maintain proper records. Contractor to issue wage slips to his employees.
- g) Contractor shall furnish proper returns to the concerned statutory authorities and provide a copy of the same to BHEL.
- h) Contractor shall be solely responsible for non-payment /delayed payment of wages / DA, contributions under EPF & MP Act, ESI Act etc.

Signature and Seal of the Contractor

- i) In case the contractor fails to make payment of wages to his employees or remittance of contribution to the concerned authorities, the security deposit / other dues / running bills under the contract can be utilized by BHEL to discharge the liability of the contractor.
- j) Contractor shall indemnify BHEL against all claims and losses under various Labour Laws, statutes or any civil or criminal law in connection with employees deployed by him.
- k) The liability for any compensation on account of injury sustained by an employee of the contractor will be exclusively that of the contractor.
- L) Contractor to obtain insurance cover for his employees / equipment / tools and tackles etc. and take third party risk insurance coverage at his own cost. BHEL shall not be responsible for any loss, damage, and pilferage of property and / or his employees.
- m) Contractor should have independent code numbers / exemptions under EPF & MP Act, 1952 and ESI Act, 1948 and shall cover his employees under the said codes.
- n) Payment of bonus under the payment of Bonus Act, Payment of gratuity under the Gratuity Act, and retrenchment compensation under Act will be the sole responsibility of the contractor.
- o) Over and above the daily wage rate, payment shall be made for leave with wages.
- p) Contractor shall observe Provisions of the Factories Act in respect of working hours, holidays, rest intervals, leave and overtime to his employee. No work shall be done on second/third shift, overtime, Sundays or on other declared holidays without written permission.
- q) In case a contractor employs women as employee he will discharge his obligation under law in respect of such women workers such prohibition of engaging them during night-hours, prohibition of employing them for more than 9 hours per day, provision of crèche facility, grant of maternity leave as per rules etc.
- r) Contractor shall be responsible for making payment of wages before expiry of 7 days from the last day of wage period and to ensure disbursement of wages in the presence of the authorities representative of contract operating division who shall record under his signature at the end of entries in the Register of wages.
- s) Contractor to obtain license under CL(R&A) Act, 1970.

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BHARAT HEAVY ELECTRICALS LIMITED
RAMACHNADRAPURAM : : HYDERABAD – 32.

SCHEDULE : “B”

ISSUE OF MATERIALS TO THE CONTRACTOR

The following materials will be issued to the contractor unless otherwise specified in any term in the SCHEDULE ‘A’ by BHEL.

FREE ISSUE ITEMS: Cement and reinforcement steel, Oxygen gas, Acetylene, Compressed air, Raw structural steel, Electrodes for fabrication, paints excluding red oxide primer shall be issued at BHEL stores for free of cost.

- a) For RMC (Ready mix concrete) items contractor has to arrange the cement quantity on their own cost. (The cement cost inclusive in these items).
- b) It will be the responsibility of the contractor to submit his demands for stores in writing at least 7 days in advance of the actual requirements.
- c) Issue of all stores in subject to the extent of their availability at the place of issue noted above. The contractor should bring any of the materials shown above in case the BHEL desire so. The contractor shall not be entitled to any claim or compensation for non-supply of the materials, for delay in the supply of stores under any circumstances.
- d) The materials will be issued only during the working hours. The contractors should have to transport them to site of work at his own cost as soon as there are issued to him.
- e) The contractor shall from time to time, render proper account of all materials issued to him by BHEL. If he fails to do so, no further issues of the materials will be made to him and he shall be held responsible for any delay in the execution of the work which may occur on this account.
- f) Where doors, windows, pipes, fittings, specials, glass, paints or others items are issued free of cost to the contractor, the contractor will have to make good at his own cost any loss or damage to part or whole of the items issued to him as above.
- g) All surplus material in good condition whether issued free of cost or on cost recovery basis and which are not returned to the BHEL Central Stores and also quantities of materials consumed in excess of the actual requirements shall be charged for at punitive rates which will be 100% more than the issue rates of BHEL. The decision of the Senior Engineer / Civil as to the extend to which the materials have been rendered surplus or have been consumed in excess of the actual requirements shall be final and binding on the contractor.

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Signature and Seal of the Contractor

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h) CEMENT

For the purpose of determining the actual requirement of cement, the theoretical consumption of cement as per Annexure "D" of General Conditions of contract shall be considered by the Senior Engineer / Civil.

The contractor shall construct store shed for storing cement, at his own cost and required site will be shown by the engineer-in-charge. Contractor shall store cement as directed by the Engineer-in-charge and shall maintain the record by entering day to day consumption and receipts. The contractors shall dismantle the temporary shed as soon as completion of work. Final bill will be forwarded subject to above conditions and certification by stores-in charge of factory civil department.

Excess consumption/misuse/damage of cement shall be charged for at punitive rates which will be 100% more than the purchased rates of cement by BHEL (i.e., @ ₹ 501/bag) will be recovered from the bills of the contractor.

i) STEEL

Steel will be issued at lengths as stocked by the Bharat Heavy Electricals Limited. The surplus steel is represented by the difference between the quantity received and the quantity required and utilised on the work with an allowance of 5% towards scrap. The scrap will be the property of the BHEL, the contractor will be responsible for the removal from the site in time and handing over to BHEL scrap yard as directed by the Engineer-in-charge.

Excess consumption of structural steel/reinforcement steel over the actual quantities+5% of allowance towards scrap balance materials consumed in excess of the actual requirements as per design/drawing shall be charged for at punitive rates which will be 100% more than the purchased rates of BHEL (i.e., @ ₹ 84,000/ton), will be recovered. The scrap material has to be returned to scrap yard BHEL against SDN (Scrap delivery note).

ACCEPTING AUTHORITY.**Signature and Seal of the Contractor**



BHARAT HEAVY ELECTRICALS LIMITED
RAMACHNADRAPURAM : : HYDERABAD – 32.

SCHEDULE : “ C ”

SERVICES: VIZ., WATER AND ELECTRICITY TO THE SITE OF CONTRACTOR.

1. WATER:

Water required for construction purpose shall be supplied by Bharat Heavy Electricals Limited and charge ₹ 60.00 per 1,000 liters. The supply will be made at a convenient point to be determined by the Senior Engineer (Civil) and Contractor has to make his own arrangements to distribute the water to places where required including cost of providing and fixing water meters. The charges for consumption of water will be as under, where water meters could not be provided by the contractor and prior permissions for the same has to be obtained in writing from the Senior Engineer / Civil.

i) On the total value of other Civil works 1.00%

Note: In respect of items (i) & (ii), only items where water is consumed on the work, will be considered for arriving at the total value.

2. ELECTRICITY:

Electricity current if required will be supplied at a convenient metered point to be determined by the Senior Engineer. Any extension required to the different work sites will have to be arranged by the Contractor him self. Energy consumed will be metered and charges at Rs 4.95 (Rupees Four & Paise Ninety five only) per unit. Where meter could not be provided. Current charges will be recovered at 70 units per each Tonne of structural steel fabrication work done.

ACCEPTING AUTHORITY.

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SPECIAL CONDITIONS

1. Time is the essence of contract and the specified time of completion is up to **16 months** which will be reckoned from the date of commencement of work.
2. These special conditions supplement the conditions to tenders and contracts and the General conditions of contract and form part of the contract documents. Where these special conditions are at variance with the General conditions of contract, these special conditions shall prevail.
3. All rates quoted shall be finished work in site inclusive of all leads, lifts and other incidental charges and those in general conditions.
4. Before quoting his rates of the work, the Bidder shall inspect the site of work and the quarries from which various materials are to be brought and should satisfy himself about the nature and scope of work to be executed and quality of materials procurable from the quarries. In every case the materials shall confirm to the relevant APSS and shall be got approved by the Engineer-in-charge before they are used on the work. The Bharat Heavy Electricals Limited will not, however after acceptance of a contract rate, pay extra charges for any other reason, in case the contractor is found later on to have misjudged the nature and scope of the work and also the availability of materials.
5. The Bidder is not allowed to alter the specifications of the unit of work noted in the Schedule-A For the sake of uniformity in comparison of tenders, the tenders should not add any conditions of their own. Tenders not complying with these conditions are liable to be rejected.
6. The issues of materials are governed by the conditions specified in Schedule-B. All other materials shall be supplied by the contractor himself and the rates for the relevant items are inclusive of all such supplies.
7. The cement concrete work plain and reinforced shall be executed as per IS: 456 (latest). A tentative sketch/drawing of work is available in the office, which is intended to give a general idea of the work to be executed and is liable for modifications during the actual execution based on the designs prepared and approved by the Competent Authority.
8. The rate quoted for Reinforced Cement Concrete items shall include smooth finishing of exposed faces. The top surfaces of roof slab shall be laid to specified slope and mortar that comes to surface due to vibrations shall be trawled so as to obtain smooth and even surface.
9. The paint to be used shall be of standard make and shall be approved by the Engineer-in-charge before applying.

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Signature and Seal of the Contractor

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10. The Bidder should specify the plant and machinery such as pan mixer, vibrators, steel shuttering etc., that he possesses and is going to use them on the work.
11. The CPWD DSR/ I.S. Specifications, those in Schedule-A shall be for all items of works. Wherever there is difference between the A.P.S.S. and I. S. Specifications, the later shall prevail.
12. The AGM (Fy. Civil) reserves the right to deviate either by addition or by deduction from the schedule of items of work given in the tender document after awarding the work.
13. In case of any difference between agreement wording and detailed drawings the interpretation of the AGM (Fy. Civil) shall be final and binding on the contractor.
14. The final acceptance of work in all items is subject proper behavior after testing regardless of whether the items are paid for or not.
15. All debris and surplus materials shall be cleared from the site as and when directed by the Engineer-in-charge. Any temporary structure/stores made by the contractor for the work shall be demolished and site cleared before payment of final bill.
16. A tender may be rejected while scrutiny of technical bids in case there is unsatisfactory post performance in the execution of an earlier contract.
- 17. If any agency produces fake certificates for experience etc. the agency will be banned from business dealings as per BHEL works policy.**
- 18. All correspondence will be communicated to agency through e-mail and the agencies are requested to see the e-mails regularly to update the correspondence.**
- 19. All the copies of certificates enclosed shall be attested by the contractor with seal.**

ACCEPTING AUTHORITY.

Signature and Seal of the Contractor



BHARAT HEAVY ELECTRICALS LIMITED

RAMACHANDRAPURAM::HYDERABAD-32.

SAFETY IN CIVIL ENGINEERING WORKS

1. While working at heights, a safe foot holds and hands holds should be provided.
2. No loose material should be allowed to remain in the vicinity of persons working at heights due to which they may inadvertently loose their balance and fall down.
3. Wherever, it is reasonable practical, workers should be made to use safety belts.
4. Ladders, crawling ladders and crawling boards are to be provided if a person has pass across or work on or from any material liable to fracture under his weight and cause him to fall more than 1.98 metres.
5. In considering whether a material is likely to fracture beneath a person's weight, regard must be had to any additional weight he may be carrying or supporting.
6. Ladders crawling boards etc., to be securely supported and if necessary secured to prevent slipping.
7. Guard rails, coverings or other suitable means may be used to prevent person stepping on to fragile material, while working or passing near it if such material is likely to fracture under his weight and cause him to fall more than 1.98 metres.
8. While working on sloping roofs, suitable, crawling, boards or crawling ladders should be used. These crawling ladders should be properly supported and securely enhanced to the sloping surface or the roof ridge.
9. Suitable and sufficient means are to be provided to prevent fall of articles from a sloping roof.

DEMOLITION:

1. Safe access should be provided to every place at which any person has to work. Scaffolds to be provided for all work that cement safety be done otherwise.
2. Shoring or either steps are to be taken to prevent accidental collapse of the building or part of the building being dismantled.
3. Similar precautions are to be taken against collapse of any adjacent building, if this would involve danger.
4. No steel work or iron work is to be cut or released unless precautions are taken to avoid danger from sudden twist, spring or collapse.

Signature and Seal of the Contractor

5. No framing is to be removed unless all practicable steps are taken to avoid collapse of the structure.
6. Demolition work is to be placed under the supervision of a competent person experienced in demolition work.

EXCAVATIONS:

1. Barriers are to be provided around excavations, shafts, pits and opening into which persons can fall a vertical distance of 1.98 metres. These barriers are to be as close as practicable to the edge of the excavations and are to be erected as soon as practicable after excavating begins. They are to be maintained in position except when necessarily removed for the access of persons or materials.
2. Adequate and suitable timbering should be used to prevent danger from falls or dislodgement of sides of excavations etc., or materials adjacent to it. Timbering is to be done as early as practicable in the course of work.
3. No person should be allowed to work in any excavation. Shaft or tunnels after explosives have been used in or near it, in a manner likely to affect stability, until a thorough examination has been made by a responsible person.
4. No person should be allowed to work in any excavation, Shaft or tunnels after an unexpected fall of work rock, earth or to her material or after substantial damager to timber or other supports, unless the part concerned is thoroughly examined by a responsible person declared safe.
5. No material should be placed near the edge of the excavation so as to endanger persons below. No load should be placed or removed near the edge of an excavation etc., where it is likely to cause the collapse of the side of the excavation and so endanger to any person.
6. If excavation is likely to affect the security of the another structure (permanent or temporary) steps must be taken to safeguard persons employed from possible collapse of that structure.
7. Means of reaching a place of safety is to be provided, when there may be danger from rising water or irruption of water or materials.
8. Means to prevent over running are to be taken when vehicle is used to tip material into pit or excavation or over the edge of embankment or earth work.

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LADDERS:

1. Ladders to be used should be of good construction, of a suitable and sound material of adequate strength.
2. Ladders with missing or defective rungs should not be used.
3. Wooden stiles or sides and wooden rungs should have grain running length wise.
4. Rungs should be properly fixed to the sides.
5. Ladders standing on a base are to be equally and properly supported on each stile or side.
6. Ladder standing on a base to be securely fixed near its upper resting place, if such fixing is impractical the ladder must be fixed at or near its lower end. If this is also impracticable a person, must be stationed at the feet of the ladder to prevent it from slipping.
7. Ladder should not be placed on loose bricks or loose packing.
8. Except when there is an adequate handled, ladder must rise to a height of a least 3 feet 6 inches (1.00 Mtr.) above the landing place or above the heights rung reached by the feet of persons using the ladder.
9. Space at each rung to be sufficient to provide adequate foot held.
10. Openings in landing places through which ladders pass should be as small as practicable.
11. Folding steps ladders should have level and firm footing and should not stand on loose bricks or other loose packing.

SCAFFOLDS:

1. Materials used for scaffolds should be of sound and adequate strength.
2. The timber used should be suitable quality, good condition, bark complete stripped off, and without paint or other treatment which would prevent defects from being easily seen.
3. Timber and material with projecting nails should not be used.
4. Metal parts should be of suitable quality, in good condition, free from corrosion or other patent defects likely to affect strength.
5. Defective parts or materials should not be used and no defective ropes or bonds should be used.
6. Standards or upright should be vertical or slightly inclined towards the building or other structure, where practicable and to be sufficiently close to ensure stability.

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7. Displacement or sinking of standards or uprights to be prevented either by provision of base plates or either adequate means.
8. Ladders used as uprights to be adequate strength secured to prevent slipping and so placed that the two stiles of sides of each ladder are evenly supported.
9. Ladders are to be horizontal, as nearly as possible and should be secured to standards or uprights by efficient means.

WORKING PLATFORMS:

1. All working platforms should be closely boarded, planked or plated.
2. Boards should be of sufficient thickness having regard to the distance between putlogs other supports.
3. All boards should be at least 51 mm thick and 210 mm wide.
4. Boards should rest securely and evenly on their supports. Each board should have at least three supports unless the thickness and the distance between the supports are such as to present on due or unequal staging when, supported on the two pipes.
5. No board should project beyond for more than four times its thickness, unless secured to prevent tipping.
6. No board should project to an extent which makes it unsafe having regard to its thickness and strength and the weight likely to be on it.
7. The platforms should be of adequate width to give sufficient working space.
8. The platforms should extend at least 600 mm. beyond, the end of wall or working face if work is being done at that end of the wall of face.
9. The platforms should have guard rails to a height of between 920 mm and 1150 mm. above the platform or any raised part of it.
10. The platforms should have toe-boards high enough to prevent falls of persons, tools and materials, with a minimum height of 15.5 mm. space between the toe-boards and the lowest guard rail should not exceed 760 mm. guard rails and toe-boards should be on the inside of uprights unless there is some other means of preventing their outward movement.
11. Guard rails and toe-boards should always remain in position except when removal is necessary for the access of persons or materials, or other necessary purposes of the work.

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SAFETY NETS AND BELTS:

1. If all or any of the above requirements is not practicable, resources may be taken to use suitable safety belts or nets to prevent persons falling from heights of 1.98 metres and above.
2. Safety belts when used should be attached continuously to suitable and fixed anchorages.
3. Safety nets should be maintained in all positions necessary to protect persons at work, except in so far as they have to be temporarily removed for the passage of materials or for any other purposes.

ACCEPTING AUTHORITY

Signature and Seal of the Contractor

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at “BHEL House”, Siri Fort, New Delhi – 110049 (India) hereinafter referred to as “The Principal”, which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as “The Bidder/ Contractor” which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), 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

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - 1.1.1 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 for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself 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.
 - 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or 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, immaterial or any other benefit which he / she is not legally entitled to, in

order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or 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.
 - 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/ PC Act; further the Bidder(s)/ Contractor(s) 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.
 - 2.1.4 The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) 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(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidders(s)/ Contractor(s) from the tender process or take action as per the separate “Guidelines for Suspension of Business Dealings with Suppliers/ Contractors” framed by the Principal.

Section 4 – Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 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.

Section 5 – Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 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 all Bidders/ Contractors/ Sub-contractors

- 6.1 The Bidder(s)/ Contractor(s) undertake(s) to demand from his sub-contractors a commitment consistent with this Integrity Pact. This commitment shall be taken only from those sub-contractors whose contract value is more than 20% of Bidder's/ Contractor's contract value with the Principal.
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 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 /Sub-contractors

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(s)

- 8.1 The Principal appoints competent and credible Independent External 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.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract 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.
- 8.5 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

take corrective action, or heal the situation, 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.

- 8.6 The Monitor will submit a written report to the CMD, BHEL 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.
- 8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.10 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

- 9.1 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.
- 9.2 If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 – Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 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.
- 10.5 Only those bidders/ contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal
(Office Seal)

For & On behalf of the Bidder/ Contractor
(Office Seal)

Place-----

Date-----

Witness: _____

(Name & Address) _____

Witness: _____

(Name & Address)_____



HSE Management System Manual

DTQS - Factory Civil & Projects

FC&P/HSE/CONTRACTOR

Site Safety Plan

**CONFIRMATION TO BE GIVEN BY CONTRACTORS
ALONGWITH TECHNICAL OFFER**

**Bharat Heavy Electricals Limited
DTQS - Factory Civil & Projects
Ramachandrapuram - 502032**

Signature of contractor with seal



HSE Management System Manual

Table of Contents

DOCUMENT NO.	DESCRIPTION
FC & P / Safety / Contractor.	1. Details of Project 2. Health, Safety and Environment Policy 3. Roles of Site Personnel 4. Safety Awareness & Training: 5. Site Safety Inspection: 6. Emergency Preparedness and Response Plan: 7. Electrical Safety Inspection: 8. Transportation and Material Handling Equipment: 9. Erection of equipment: 10. Commissioning of equipment: 11. Use of Personal Protective Equipment (PPE): 12. Housekeeping: 13. Accident Investigation and Reporting: 14. Protection against Fire 15. Protection against Noise 16. Welding Sets 17. Civil / Structural Work 18. FIRE FIGHTING PLAN 19. NOISE STANDARDS 20. List of Applicable Statutory / Regulatory requirements
Checklist / Formats / Guidelines- Available with FC & P Department	
FC&P/QII-4-409/010	SAFETY DECLARATION BY CONTRACTOR
FC&P/HSE:CL01	CHECK LIST FOR WORKING AT HEIGHT
FC&P/HSE:CL02	CHECK LIST FOR HOUSE KEEPING
FC&P/HSE:CL03	CHECK LIST FOR SCAFFOLDING
FC&P/HSE:CL04	CHECK LIST FOR GENERAL SAFETY INSPECTION
FC&P/HSE:CL05	CHECK LIST FOR HEAVY MATERIAL HANDLING EQUIPMENT INSPN.
FC&P/HSE:CL06	CHECK LIST FOR ARC WELDING TRANSFORMER
FC&P/HSE:CL07	CHECK LIST FOR DC ARC WELDING GENERATOR
FC&P/HSE:CL08	CHECKLIST FOR STAGING
FC&P/HSE/SSP/02	Hazards Risk & Preventive Measures at Construction Sites.
Dtd. 30.06.06	Guide lines for Resident Managers on Contract Labour, Safety & Accident Reporting System
Dtd. 30.06.06	List of Relevant Legislations applicable to Various Sites
FC&P/HSE:AIR:001	Accident (Personal injury / property damage) Report

Signature of contractor with seal



HSE Management System Manual

FC&P/HSE/CONTRACTOR

CONSOLIDATED SITE SAFETY PLAN

1. Details of Project

1.	Name of the Project	
2.	Job Number	
3.	LOI No. & Dt.	
4.	Overall Scope of work:	Civil Structural Mechanical / Air-conditioning Electrical & Instrumentation Others
5.	Project Schedule	Starting Date: Completion Date:
6.	Erection & Commissioning Machinery / Tools / Instruments Required:	
7.	Contractor Details	Name of the Contractor Agreement No. & Dt.: Duration of Completion:
8.	Name of BHEL Residence Manager	Attach Site Organization Chart of BHEL
9.	Designated Safety Officer of BHEL	
10.	Name of contractor Site- in-charge	Attach Site Organization Chart of contractor
11.	Designated Safety Officer of contractor	

Signature of contractor with seal



HSE Management System Manual

FC&P/HSE/CONTRACTOR

CONSOLIDATED SITE SAFETY PLAN

2. HEALTH, SAFETY & ENVIRONMENTAL POLICY

The Management is committed to be an environmentally sound company in its activities, products, services and to provide safe and healthy working environment to all employees as an integral part of business performance and strive towards zero accident through:

- Compliance with applicable Legislation and Regulations.
- Promoting the objective to minimize waste generation and to conserve/reduce/reuse resources such as raw materials, water and power.
- Enhancement of Environmental, Safety and Occupational Health awareness amongst employees, customers and suppliers by proactive communication and training.
- Continual improvement through periodical review of EMS and OHSAS to ensure its suitability, adequacy and effectiveness.
- Regular evaluation and proactive measures for prevention of accidents/ occupational diseases. Communication of HSE Policy to all employees and interested parties.
- Coordination with concerned agencies/regulatory bodies engaged in Occupational Health, Safety & Environmental activities.

3. Roles of Site Personnel:

Contractor Site in charge:

- Ensuring that HSEMS requirements are implemented and maintained at sites in consultation with Executing Engineer. He shall have commensurate authority and organizational freedom in that regard.
- He shall report on the performance of the HSEMS to the BHEL Executing in charge for review.
- Identification and evaluation of Environmental Aspects & Impacts, Occupational Health & Safety Hazards and assess Risks at Site.

Duties & Responsibilities of the Safety Officer at Site:

- To advise on safety aspects to all personnel at site including contractors.
- To carry out Site safety inspection in order to observe the physical conditions of work and the work practices and procedures followed by contractors and to render advice on measures to be adopted for removing the unsafe physical conditions and preventing unsafe actions by contractor's personnel.
- To organize / verify the availability of personal protective equipment To investigate select accidents
- Co-ordinate hazard and risk management
- Obtain Safety Declaration from Contractor.
- Impart Safety Training to contractors and BHEL Personnel working at Site.

Signature of contractor with seal



HSE Management System Manual

FC&P/HSE/CONTRACTOR

CONSOLIDATED SITE SAFETY PLAN

4. Safety Awareness & Training:

Safety Awareness and consciousness among workers, supervisors and executives is imparted by the Designated Safety Officer of BHEL Contractor. This is done by way of following.

- Talk on Safety issues as per Site Safety Plan
Posters and Notices at prominent places
- Display of warning boards
- Creating awareness and response for emergencies like Fire, Shock, accidents, and dangerous occurrences and on First-aid, Emergency assistance agencies and their contact telephone numbers etc.
- Use of Personnel Protective Equipment

5. Site Safety Inspection:

Designated Safety Officer will inspect the site on Daily basis

- To identify unsafe conditions and unsafe actions by the labourers and bring to the notice of Contractor, Site in charge BHEL Executive Engineer. The main objective of the Daily Inspection is to rectify the potentially dangerous situations and avoid occurrence of any incident.
- To suggest suitable remedial action to correct the unsafe conditions / acts.
- To use appropriate checklists FC&P:HSE:CL01 to CL08 to verify and record the safety observations.
- To follow the Copy of Safety Manual – Health and Safety Plan for BHEL FC&P Department

6. Emergency Preparedness and Response Plan:

- Use the **Emergency Preparedness and Response Plan** FC&P/HSE/EPR/01 available at Factory Civil Department.
- First aid kits are to be kept in the site office or the locations in the vicinity of work place. The kit is to be maintained. Records of FIRST AID treatment given to be maintained in a register.
- Whoever first notices the accident occurrence shall immediately notify the same to Designated Safety Officer / Other BHEL executives.
- Determine the area of accident and organize for evacuation of the personnel.
- Organize for sending the injured person to nearby First-aid / Health Center / Hospitals depending on the emergency.
- In the event of fire organize for extinguishing the fire using the apparatus available and for major fires notify the local / nearby Fire Station.

Signature of contractor with seal



HSE Management System Manual

FC&P/HSE/CONTRACTOR

CONSOLIDATED SITE SAFETY PLAN

7. Electrical Safety Inspection:

- All the electrical distribution system, sub system, relevant protection unit at electrically powered machines and tools are inspected periodically including earthing at two points, to avoid electrical shocks.
- Checklist for Housekeeping - FC&P:HSE:CL02 and General safety inspection FC&P/HSE:CL04, is used for periodical inspection.
- For safe operation all the Electrical portable tools and devices are connected with Earth Leakage Circuit Breaker (ELCB) protection at Distribution Board and continuity of earth connection is to be ensured.
- The ELCBs are tested periodically and records of such tests are maintained.
- After each inspection the filled up check list date wise is to be retained by Resident Manager.

8. Transportation and Material Handling Equipment:

- Checklist of Inspection of Material Handling Equipment FC&P/HSE:CL05 shall be used and records are to be maintained.

9. Erection of equipment:

- The instructions given in Erection Manual FC&P: EM-1 to IS:EM-5 in FIVE Volumes are to be followed during erection of equipment. SAFETY MANAGEMENT AT ERECTION SITES is elaborated in Document No. FC&P: EM-4/1
- Wherever Checklists are provided, the same shall be used and records are to be maintained.

10. Use of Personal Protective Equipment (PPE):

- The PPE in use shall conform to IS or other relevant standard and the same shall be discarded in case it is damaged or worn out. The specification of the PPE is available with BHEL FC&P departments.
- Personal protective equipment shall be provided by vendor for all workers, labour and site personnel during construction.
- Wherever Checklists are provided, the same shall be used and records are to be maintained.

HEAD PROTECTION	<ul style="list-style-type: none">• Industrial SAFTEY Helmet• Leather Cap
FACE PROTECTION	<ul style="list-style-type: none">• Plastic face shield• Welding Hand Shield• Welding Head Shield
EAR PROTECTION	<ul style="list-style-type: none">• Ear muffs/ plugs
EYE PROTECTION	<ul style="list-style-type: none">• Goggles• Welding filter lens

Signature of contractor with seal

BODY PROTECTION	<ul style="list-style-type: none"> • Aluminsed suit • Fire proximity switch • Apron • Safety belt • Pant & Jerkin • Cotton overall • Over coat • Gloves • Barrier cream • Hand cleanser
FOOT PROTECTION	<ul style="list-style-type: none"> • Kevlar safety boots • Gum boots (knee boots) • Safety shoes • Cotton socks • Leather leg guards
NASAL PROTECTION	<ul style="list-style-type: none"> • Cloth & paper respirator (Dust & Mist) • Chemical fume respirator • Welding fume respirator • Canister gas mask • Airline respirator • Self-breathing apparatus

11. Housekeeping:

The site safety plan document reference No. FC&P/HSE/SSP/01 available at BHEL site office is to be followed regarding the housekeeping of materials, equipment. Scrap etc. during construction.

The housekeeping checklists FC&P/HSE/SSP/02 in this document shall be followed and records are to be maintained.

12. Accident Investigation and Reporting: To be followed as per BHEL guidelines given below in consultation with BHEL

GUIDE LINES FOR EXECUTING ENGINEER ON CONTRACT LABOUR, SAFETY & ACCIDENT REPORTING SYSTEM

CONTRACT LABOUR

- 1) Form V under contract labour (Regulation & Abolition Act) may be arranged from BHEL, who is the principal employer, in the name of contractor directly and ensure that the contractor shall obtain license under contract labour (Regulation & Abolition Act)
- 2) Ensure PF coverage in respect of all the contract labour deployed by our contractors.
- 3) Ensure ESI coverage, wherever applicable, in respect of all the labour deployed by our contractors.
- 4) Ensure gate pass issued by CISF to all the contract labour deployed by our contractors.
- 5) Ensure Insurance coverage in lieu of workmen's compensation in respect of all the contract labour deployed by our contractors.
- 6) Ensure payment of minimum wages, bonus, gratuity and other statutory payments to the contract labour.

SAFETY

- 7) Ensure compliance of all safety measures /aspects by contractors.

Signature of contractor with seal

- 8) Ensure usage of PPEs as per the safety norm for each work/site by BHEL, employees and persons engaged by the contractors.
- 9) Ensure compliance of safety aspects envisaged in HSE management system manual.

13. INCIDENT/ACCIDENT REPORTING, INVESTIGATION AND FOLLOW UP:

INCIDENT/ACCIDENT REPORTING:

Whenever an Incident/Accident involving injury to a person occurs in the site the executing engineer shall be informed immediately,
The concerned executive will-

1. Send the injured person immediately to the First-aid Center / Main Hospital for treatment along with the "Staff Movement Pass -Medical " {FORM GEN- 020}.
2. Prepare the Incident/Accident Reports {FORM SFT -001, and after endorsement by the attending doctor, distribute within 24 hours of the accident.

3 Copies -----Endorsement by Doctor.
Safety Engineering Dept.-----Pink Copy
Personnel/Welfare Dept. -----Green Copy
Dept. where accident took place-----White Copy

3. Safety Engineering Dept. along with Block Safety Officer and OHS Doctor will prepare the Accident Investigation Report containing accident and suggestions for remedial measures and distribute to

-Head of Department where the accident took place.
-Product Head of the Department.
-Chairman - Central Safety Committee & Manager of the Factory.

4. In case, the disablement period due to the accident is more than 48 hours -
 - 4.1 Safety Engineering Dept. will fill the details of the accident in "FORM 18" (Prescribed under the Factory Rules), and send it to the Inspector of Factories under the Signature of the Manager of the Factory within 72 hours of the accident occurrence.

5. In case of Fatal Accident -

5.1 Safety Engineering Dept./HR (Welfare) will immediately (with in 12 hrs) give messages to

- The Inspector of Factories
- The Inspector of Police
- District Magistrate.
- The nearest kith and kin through phone or telegram or Special Messenger.

5.2 The Manager of the Factory will appoint a Committee to go into the details of the accident and suggest remedial measures to avoid recurrence, within a fortnight of its constitution.

6. **PROPERTY DAMAGE:**

6.1 Due to accident, dangerous occurrence, any major damage to materials, machinery, equipment or building occurs, "DAMAGE REPORT" (FORM: SFT 002) will be prepared by the Manager of the area and distribute within 24 hours to

- SAFETY ENGINEERING DEPT.
- STORES (Claims & Insurance)
- HEAD OF MAINTENANCE & SERVICES
- THE PRODUCT HEAD
- CHAIRMAN - CENTRAL SAFETY COMMITTEE & Manager of the Factory.

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6.2 In case of Dangerous occurrence such as bursting of a Plant or container, Collapse or failure of a Crane or Structure, explosion and leakage of molten Metal or hot liquid or gas, causing bodily injury to any person, Safety Engineering will prepare the "Report of Dangerous Occurrence" (FORM 18 A - (Prescribed under Factory Rules) and send to the Inspector of Factories within 72 hours of Occurrence

BHEL	INCIDENT/ACCIDENT REPORT	Form: SFT 001
HYD-32		
A.		
Name :	Staff No.	Dept.:
Designation & Trade	Age:	Work Centre:
Date & Time of Accident	Salary:	Accident spot:
Additional Information in case of Contract Labour		
Father/Husband's Name	ESI No.	
Address of the Injured:	Name of the Contractor and Address:	
B. 1. Narration of accident:		
2. What was the injured doing at the time of the accident.		
3. Name of the object or substance which directly caused the injury.		
4. Witnesses:		
Sl. No.	Name	Staff No. Desg. Dept. Code.
1.		
2.		
Signature of the Reporting Officer		
Name		Date:
Desg.		Time:
C. Doctor's Certification in case of Medical assistance:		
C1. Location of the Injury	:	
C2. Nature of the Injury	:	
C3. Leave recommended	:	
C4. Name of Hospital if referred outside	:	
Signature of the Doctor :	Name:	Date:
FORM: SFT: 001		

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CONSOLIDATED SITE SAFETY PLAN

14. Protection against Fire

- The GENERAL SAFETY INSPECTION Checklist – FC&P/HSE: CL04 available in this document shall be followed and records are to be maintained.
- **FIRE FIGHTING PLAN** Extract from: Chapter 4 – Internal Appliances of Fire Protection Manual Issued by Tariff Advisory Committee Bombay as elaborated below is to be followed for finalizing the requirement of fire extinguishers at site. (please refer point No. 18 below.

15. Protection against Noise

- The Equipment used at Construction site must follow the acceptable ambient noise level as detailed below in **NOISE STANDARDS**.

16. Welding Sets

- Whenever Welding sets are brought by the contractor to site, the healthiness of the equipment is to be checked and inspected and the record is to be maintained as per the checklist FC&P/HSE:CL06 and CL07.

17. Civil / Structural Work

Wherever Civil work is involved the following work instructions / checklist are to be referred and followed.

- **Work Instructions for Civil Work at Site** – FC&P:CW:01, Rev:01, Dated 04.09.1996.
- Checklist for Scaffolding FC&P:HSE:CL03
- Checklist for Working at Height FC&P:HSE:CL01
- Checklist for Staging FC&P: HSE: CL 08
- Formats for Field Quality Plan

18. FIRE FIGHTING PLAN

Extract from: Chapter 4 – Internal Appliances of Fire Protection Manual Issued by Tariff Advisory Committee Bombay.

Class of Fire	Suitable type of appliances
---------------	-----------------------------

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CONSOLIDATED SITE SAFETY PLAN

A. Fire in ordinary combustible (wood, vegetable, fiber, paper etc.)	Chemical extinguishers of soda acid, gas / expelled water and anti-freeze types and water buckets.
B. Fires in flammable liquids, paints, grease, solvents etc.	Chemical extinguishers of Foam, Carbon Dioxide and Dry powder type and sand buckets.
C. Fire in gaseous substances under pressure	Chemical Extinguishers of Carbon Dioxide and Dry Powder Type.
D. Fire in reactive Chemicals, active metals	Special type of Dry Powder extinguishers and sand buckets.
E. Fire in electrical equipment's.	Chemical Extinguishers of Carbon Dioxide and Dry Powder Type and sand buckets.
Clause 4.1.3.2	One 9 litre Water / Sand Bucket for every 100 sq.metre area
Clause 4.1.3.5.1	One no. of Not less than 2 kg, Dry Powder CO ₂ extinguisher within 15 metres of apparatus for rooms containing electrical transformers & switchgear.
Clause 4.1.3.5.2	One no. 5 kg, Dry Powder CO ₂ extinguisher within 15 metres of Motors / other Electrical equipment.

The following example will illustrate the method of determining the number of fire extinguishers required to give adequate protection for a given property:

Light engineering workshop (light hazards).

Area: 315m X 112m = 35300 sq.m

Type of fire:

1. Class A Fire due to normal combustibles
2. Class B Fire due to existence of spray painting process and storage of flammable liquids
3. Class E fire due to two electrical DB and motors

Number of appliances

Basic protection

353 buckets and

59 water type

extinguishers OR

90 Water type extinguishers if buckets are dispensed with.

For Class B fires 2 Water type extinguishers are replaced by 2 Foam Extinguishers.

For Class E fires 6 Dry Powder Extinguishers are provided. Thus the total no. of fire extinguishers are Water type: 88

Foam type: 2

Dry powder type: 6

TOTAL 96

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	<h1 style="text-align: center;">HSE Management System Manual</h1>
FC&P/HSE/CONTRACTOR	CONSOLIDATED SITE SAFETY PLAN

Reference Standards for Fire Extinguishers:

Sl.No.	Standard / Year	Description
1.	IS940 : 1989	Specifications of Portable fire extinguisher, water type (gas cartridge)
2.	IS2171 : 1999	Specifications of Portable fire extinguisher, Dry powder (Cartridge type)
3.	IS2878 : 1986	Specifications for Fire extinguisher, Carbon Di-oxide Type (Portable & trolley mounted)
4.	IS10204 : 2001	Specifications of Portable fire extinguisher, mechanical foam type
5.	IS10658 : 1999	Specifications for Higher capacity Dry powder Fire extinguisher (Trolley mounted)
6.	IS13385 : 1992	Specifications for Fire extinguisher, 50 capacity wheel mounted water type (Gas Cartridge)
7.	IS13386 : 1992	Specifications for Fire extinguisher, 50 l capacity, mechanical foam type
8.	FPM / June 1995	Fire Protection Manual (Part-I) By Tariff Advisory Committee

19. NOISE STANDARDS

NOISE : (Ambient standard)

Area Code	Category of Area	Limit in dB (A) Leq	
		Day time (6 AM to 9 PM)	Night time (9 PM to 6 AM)
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

Silence Zone is defined as area upto 100 metres around such premises as hospitals, educational institutions and courts.

Source: EPA Notification [G.S.R. 1063(E), DT. 26th Dec.1989]

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CONSOLIDATED SITE SAFETY PLAN

Domestic appliances & Construction equipment acceptable noise level:

Sl.No.	Type of Appliances	Standard dB(A)
1.	Window Air-conditioner to 1 Ton to 1.5 Tons	68
2.	Air Coolers	60
3.	Refrigerators	46
4.	Diesel Generators for Domestic Purpose	85-90
5.	Compactors (Rollers) Front Loaders, Mixers, Crane movable, Vibrators and Saws	75

Source: EPA Notification [G.S.R. 742(E), DT. 30th Aug.1990]

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CONSOLIDATED SITE SAFETY PLAN

20. List of Applicable Statutory / Regulatory Requirements:

Sl No.	Standards	Applicable
1.	Indian Electricity Rules, 1956	Yes/ No
2.	The Electricity Act 2003	Yes/ No
3.	The Indian Electricity Act 1910	Yes/ No
4.	The Motor Vehicle Act 1988	Yes/ No
5.	The Central Motor Vehicle Rules 1989	Yes/ No
6.	The Gas Cylinder Rules 2004	Yes/ No
7.	The Environment Protection Act 1986	Yes/ No
8.	The National Environment Tribunal Act 1995	Yes/ No
9.	The Noise Pollution (Regulation & Control) Rules 2000	
10.	Battery (Management & Handling) Rules 2000	Yes/ No
11.	Ozone depleting Substance s(Regulation & Control) Rules 2000	Yes/ No
12.	Pollution Control Act, Rules & Notifications, September 2001	Yes/ No
13.	Pollution Control Law – Environmental Standard for Ambient Air, Automobile, Fuels, Industries and Noise – July 2000	Yes/ No
14.	CBIP Guidelines	Yes/ No
15.	Contract Labour (Regulation & Abolition) Act 1970	Yes/ No
16.	Factories Act 1948 with relevant state rules	Yes/ No
17.	The Buildings & Other Construction Workers (Regulation of Employment & Conditions of Service) Act 1979	Yes/ No
18.	The Inter State Migrant Workmen (Regulation of Employment & Conditions of Service) Act 1979	Yes/ No
19.	The Child Labour (Prohibition & Regulation) Act 1986	Yes/ No
20.	Minimum Wages Act 1948 with relevant state amendments	Yes/ No
21.	Payment of wages Act 1936	Yes/ No
22.	Payment of Bonus act 1965	Yes/ No
23.	Payment of Gratuity Act 1972	Yes/ No
24.	Employees Sate Insurance Act 1948	Yes/ No
25.	Employees Provident Funds & Miscellaneous Provisions Act 1952	Yes/ No
26.	Fatal Accidents Act 1855	Yes/ No
27.	The Personal Injuries (Compensation Insurance) Act 1963	Yes/ No
28.	Works men Compensation Act 1923	Yes/ No
29.	The Industrial Disputes Act 1947	Yes/ No
30.	Environmental Standards for TPP	Yes/ No
31.	The Indian Boilers Act 1923	Yes/ No
32.	Tariff Advisory Committee – Insurance	Yes/ No
33.	Hazardous Goods TAC	Yes/ No

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CONSOLIDATED SITE SAFETY PLAN

SAFETY DECLARATION BY CONTRACTOR

1. Name of contractor
 2. Work Order No.
 3. Nature of work
 4. Project
 5. Number of workers deployed
 6. Number of workers attended safety induction training.
 7. Safety appliances issued to workmen
 8. First Aid box provided at site
 9. Safety clearance taken from concerned authority for starting the job.
 10. Sand and water provided at the welding station
 11. Fire extinguishers provided at site
- Category:
- | | | |
|----|---|------|
| 1. | - | Nos. |
| 2. | - | Nos. |
| 3. | - | Nos. |
| 4. | - | Nos. |
- Name of the appliances:
2. Safety Helmet
 3. Safety Boots
 4. Hand gloves
 5. Safety belts
 6. Safety goggles
 7. Dust masks

Date:

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FIELD QUALITY PLAN

FOR

**CIVIL WORKS- FOUNDATION &
SUPER STRUCTURE
(EXECUTION)**

FOR

**CONSTRUCTION OF PE & SD BUILDING
(G+2 FLOORS)**



**BHARAT HEAVY ELECTRICALS LIMITED
R C PURAM HYDERABAD
FACTORY CIVIL DEPARTMENT(DTQS)
HYDERABAD- 502 032**

**DOC. No: QPE-CL-001
REV. No: R00 / 01-08-13**



FY CIVIL(DTQS)


AUTHORISATION FOR DIFFERENT CATEGORIES OF CHECKS


CLASSIFICATION OF CHECKS		CHECKING&ACCEPTING AUTHORITY	ACCEPTING AUTHORITY
A	CRITICAL	EXECUTION ENGINEER & DTQS ENGINEER	DTQS
B	MINOR	EXECUTION ENGINEER	SUPERVISING AUTHORITY
EXECUTING AUTHORITY :		FOR ERECTION	ERECTION ENGINEER
		FOR COMMISSIONING	FOR COMMISSIONING
SUPERVISING AUTHORITY :		FOR ERECTION	IN-CHARGE ERECTION
		FOR COMMISSIONING	IN-CHARGE COMMISSIONING


NOTE :


1. DTQS Engineer shall witness "A" category checks. He is also authorised to carry out surveillance in any of the B category of checks at this direction.
2. In case of non-conformity, accepting authority shall ensure disposition before accepting and the dis-positioning shall be reflected on Log sheets/Protocols.
3. DTQS Engineer shall ensure that only calibrated instruments are used for final acceptance Measurements.
4. Other Non-conformance shall be disposed as per their Quality system.


		STATUS OF AMENDMENTS		DOC. NO. : QPE-CL-041	
FY CIVIL(DTQS)				REV. NO. : R00	
				SHEET 1 / 1 SHEET	
SL. NO.	REFERENCE OF SHEETS AMENDED	AMENDMENT NO. & DATE	REMARKS		
NIL					


 FY CIVIL(DTQS)	STATEMENT OF CHECKS	DOC. NO. : DTQS-CL-XXX
		REV. NO. : R01
		SHEET 1 / 19 SHEETS
PROJECTS: CONSTRUCTION OF PE & SD BUILDING		
System: CIVIL WORKS		
Sub-system: FOUNDATION & SUPER STRUCTURE		
Area: EXECUTION		
<p>NOTES:</p> <ol style="list-style-type: none"> 1. For checks where log sheets are not called for, suitable records should be maintained in the form of log sheets / protocols. 2. As an evidence of having carried out the work satisfactorily, a general purpose log sheet, L-00 shall be maintained for all the checks. 3. In case of variation in parameters, indicated in the characteristics column. the values mentioned in the drawings shall prevail. 		


 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL,HPEP HYDERABAD-32		FIELD QUALITY PLAN				AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE			
				SYSTEM: CIVIL WORKS SUB SYSTEM: SURVEY / FILLING MATERIAL		FQP No. : QPE-CL-xx REV. No. : R01 PAGE No.: 2/19					
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/HOLD POINTS(H)			
1.0	FILLING MATERIAL:										
1.1	Check for suitability of filling material for each type and each source. a) Grain size analysis b) Specific Gravity c) Liquid limit & plastic limit d) Shrinkage limit e) Free swell index f) Chemical analysis i) Organic matter ii) Ph.value iii) Total soluble sulphate iv) Chloride content	T	Lab	B	IS2720	One sample in every 50000M ³ of fill material for each source	Report				
1.2	Ensure that earth work for filling is obtained from a. The source is tested and got approved b. Standard proctor test to determine OMC & Maximum Dry Density etc. for each type and each source of filling material and moisture content of fill material before compaction	V	Lab	B	IS2720						
		T	Proctor Density set	B	IS2720 & Tech.Specn.	Once in every 10000M ³ of fill material	Protocol				
		LEGEND: <u>CLASS #</u> : A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND . <u>TYPE @</u> : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE					
Engineer											
FY CIVIL(DTQS)											


 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..		FIELD QUALITY PLAN			AGENCY :M/s _____		
				SYSTEM: CIVIL WORKS SUB SYSTEM: EARTH WORK- EXCAVATION & FILLING		FQP No. : QPE-CL-041 REV. No. : R00 PAGE No.: 3/19		PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE	
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)	
2.0	EARTH WORK- EXCAVATION:								
2.1	Ensure that the vegetation in the plant area is completely removed.	P		B		100%			
2.2	Ensure that excavation is carried out for levelling & grading including dressing to the specified levels & grades.	V		B	Drawing	100%	Log book		
2.3	Ensure that surplus earth unsuitable for filling are dumped and leveled as specified.	V		B	Tech.Specn.				
3.0	FILLING AND COMPACTION:								
3.1	Check that all the "blocks" are filled with approved filled material as per priority.	P		B		100%			
3.2	Ensure that the area to be filled is free from water slush, vegetables, roots etc.	V		B		100%			
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: <u>CLASS #</u> : A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND <u>TYPE @</u> : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE			
		REVIEWED BY	APPROVED BY	APPROVAL SEAL					


 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..		FIELD QUALITY PLAN				AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE		
				SYSTEM: CIVIL WORKS SUB SYSTEM: FILLING & COMPACTION		FQP No. : QPE-CL-041 REV. No. : R00 PAGE No.: 4/19				
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)		
3.3	Carry out the leveling of the filled area	V	Levelling instrument	B	Levelling plan	-	Register			
3.4	Ensure that the filled material is spread in horizontal layers not exceeding 250mm.	V		B		100%				
3.5	Ensure that each block is finished with formation level, as specified.	M		B	Tech. Specn.	100%				
3.6	Check that watering is done before starting compaction	V		B	IS 2720	100%				
3.7	Ensure that the compaction is carried out by manual ramming to the required extent	V		B	IS 2720	100%				
3.8	Ensure that, when walked on compacted surface, noticeable induction by roof male is not there	V		B		On each compacted layer on above				
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: <u>CLASS #</u> : A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEER. <u>TYPE @</u> : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE				
						REVIEWED BY	APPROVED BY	APPROVAL SEAL		


 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32.		FIELD QUALITY PLAN				AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE		
				SYSTEM: CIVIL WORKS SUB SYSTEM: TEST EQUIPMENT/ BRICKS		FQP No. : QPE-CL-041 REV. No. : R00 PAGE No.: 5/19				
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)		
4.0	Test Laboratory Establishment:									
4.1	Ensure that test laboratory is established at site before commencement of civil work. (List of equipment as per Annexure-I)	V		A	Annexure – I	100%	-			
5.0	Bricks: (Burnt Clay / Fly ash Lime Bricks):									
5.1	Ensure that the bricks are of uniform colour, free from cracks and warpage, Efflorescence test	V		B	IS 1077 IS 12894	For every 10000 nos or part thereof	Register			
5.2	Ensure clear ringing sound is heard on being struck	P		B	IS 1077	-do-				
5.3	Check for the dimension	M	Tape	B		-do-				
5.4	Ensure that the following tests are conducted: Compressive strength(Minimum 50 Kg/cm2) & water absorption(after 24 hrs immersion shall not exceed 20% by weight)	M	Lab	A	IS 1077 IS12894	-do-	Protocol			
5.5	Check for soundness			B	-	-do-				
5.6	Check for efflorescence			B						
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: CLASS #: A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEER. TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE				
						REVIEWED BY	APPROVED BY	APPROVAL SEAL		


 FY CIVIL(DTQS)	SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..	FIELD QUALITY PLAN				AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE								
		SYSTEM: CIVIL WORKS SUB SYSTEM: EARTHWORK/CEMENT		FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 6/19										
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)						
6.0	Cement													
6.1	Ensure that :- - Not more than 200bags are drawn per indent.													
6.2	Ensure the cement is stored properly to avoid deterioration due to moisture and contamination by various impurities - Covered storage is provided - Cement is stored on raised platform - Not more than 10 bags are stacked on one heap with proper access for inspection - Cement shall be stacked consignment wise, type and grade wise for clear identification - Different type of material are stored separately	V/P		B	IS4082									
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: <u>CLASS #</u> : A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEER. <u>TYPE @</u> : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td>REVIEWED BY</td> <td>APPROVED BY</td> <td>APPROVAL SEAL</td> </tr> </table>						REVIEWED BY	APPROVED BY	APPROVAL SEAL
REVIEWED BY	APPROVED BY	APPROVAL SEAL												


 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..		FIELD QUALITY PLAN				AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE						
				SYSTEM: CIVIL WORKS SUB SYSTEM: CEMENT/ FINE AGGREGAE		FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 7/19								
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)						
7.0	Fine Aggregate (Sand)													
7.1	Ensure that the following tests are conducted for each source of supply and check whether the material is as per standards (for mix design) a. Silt & clay content b. Sieve analysis	T	Measuring jar weigh balance, sieve set, oven	B	Test Certificate IS 383 IS 515 IS 2386	One for each source	Report							
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: <u>CLASS #</u> : A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND 'C' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td>REVIEWED BY</td> <td>APPROVED BY</td> <td>APPROVAL SEAL</td> </tr> </table>						REVIEWED BY	APPROVED BY	APPROVAL SEAL
REVIEWED BY	APPROVED BY	APPROVAL SEAL												


 BH&P FY CIVIL(DTQS)	SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..	FIELD QUALITY PLAN				AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE			
		SYSTEM: CIVIL WORKS SUB SYSTEM: FINE AGGREGAE / COARSE AGGREGATE		FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 8/19					
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)	
7.2	Conduct tests and ensure that the material is as per standards before use at site a. Silt & clay content b. Sieve analysis	T	Sieve set, Weigh balance	B	Test Certificate IS 383 IS 515 IS 2386	Once for every 100 M ³	Register		
8.0	Coarse Aggregate (Stone Metal/Gravel)								
8.1	Conduct the following tests and ensure that the material is as per standards (for mix design) a. Sieve analysis b. Moisture content c. Flakiness d. Voids	T	Sieve Set, weigh balance, Oven, Jar	B	Test Certificate IS 383 IS 515 IS 2386 & Tech. Specn.	Once for each source	Report		
		V							
8.2	Conduct test and ensure that the materials are as per std. before use at site. a) Sieve analysis	T	Sieve Set, weigh balance	B	Protocol	Once per every 100 M ³	Register		
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: CLASS #: A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND 'C' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE			
		REVIEWED BY	APPROVED BY	APPROVAL SEAL					


 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..		FIELD QUALITY PLAN			AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE		
				SYSTEM: CIVIL WORKS SUB SYSTEM: REINFORCING STEEL		FQP No.: QPE-CL-0xx REV. No. : R01 PAGE No.: 9/19			
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)	
9.0	Reinforcement Steel								
9.1	Verify the following								
	a. Surface characteristics like free from cracks, Surface flaws, imperfect edge, laminations & rough jogged	V		B		Random	Register		
	b. Proper identification for different type and size of steel								
9.2	Ensure fabrication is done as per details given in drawings and bar bending schedules	M	Tape	B	Drawing and IS 2502	100%	Register		
	a) Ensure that the joints and crossing bars are tied properly with right gauge wire	P		B	Drawing	100%			
	b) Ensure lapping of bars, wherever necessary	P		B	Drawing & IS 456	100%			
	c) Check for placement of reinforcement bar	P		B	Drawing	100%			
11.0	Form Work (Shuttering)								
11.1	Form work materials are as per technical specification	V		B	IS 14687	100%			
11.2	Ensure the form work is as per technical specifications and drawings	P/V		B	Tech. Specn. / Drawing	100%			
Manager / DTQS FY CIVIL(DTQS) SIGNATURE		LEGEND: CLASS #: A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND 'C' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE			
						REVIEWED BY APPROVED BY APPROVAL SEAL			


 FY CIVIL(DTQS)	SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..	FIELD QUALITY PLAN				AGENCY :M/s _____			
		SYSTEM: CIVIL WORKS SUB SYSTEM: FORM WORK	FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 11/19	PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE					
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)	
11.3	Check for the following: a. Cleanliness, damage and warpage b. Ensure internal dimension of shuttering c. Ensure horizontality / verticality before and after placement of reinforcement d. Stagging if any e. Ensure the following: - Strength and soundness of material - Proper joining/bracing - Proper support - Verticality of side shutterings before and after reinforcement - Specified level	V M M V/P V T/V P P	Water level Tape Sprit level plumb bob - Plumb bob Water level	B B B B	Drawings & Tech.Specn. Drawings	100% 100% 100%			
11.4	Form work materials are as per the specification			B					
11.5	Check that there is no loss of liquid through joints			B					
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: CLASS #: A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEER TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE			
						REVIEWED BY	APPROVED BY	APPROVAL SEAL	


 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..		FIELD QUALITY PLAN			AGENCY :M/s _____		
				SYSTEM: CIVIL WORKS		FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 12/19		PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE	
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)	
12.0 12.1	Plant & Machinery Ensure availability of the following - Concrete mixer - Vibrators of adequate capacity - Weigh batchers & measuring boxes in exceptional cases - Lighting - Pumps –type and rating - Excavator, power roller , plate compactor	V		B		100%			
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: <u>CLASS #</u> : A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE REVIEWED BY APPROVED BY APPROVAL SEAL			


 FY CIVIL(DTQS)	SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..		FIELD QUALITY PLAN				AGENCY :M/s _____		
			SYSTEM: CIVIL WORKS SUB SYSTEM: CONCRETING		FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 13/19		PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE		
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)	
15.0	Concreting:					Pour card			
15.1	Ensure the following:								
	a. Preliminary tests are conducted for determining design mix for required strength at site	T	Compressive Test M/c	A	IS 456 IS 10262	Once per source			
	b. Cement water and aggregate content as per mix design	M	Weigh batcher, Measuring jar	B	IS : 456 IS:1791 IS:1199	100%			
15.2	Ensure for continuous concreting adequate quantity of constituents	P		B	IS 456	100%			
15.3	The reinforcements are placed correctly in position with adequate separators before pouring concrete	P		B	Drawings	100%			
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: CLASS #: A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE			
		REVIEWED BY	APPROVED BY	APPROVAL SEAL					


 FY CIVIL(DTQS)	SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..		FIELD QUALITY PLAN SYSTEM: CIVIL WORKS SUB SYSTEM: CONCRETING				FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 14/19		AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE		
	SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)		
15.5	Check and ensure the following: a. Old concrete surfaces are chipped, cleaned with wire brush, wetted and a coat of cement slurry applied before laying new concrete b. Area to be concreted is clean and free from debris and any extraneous matter of water logging c. Adequate cover is provided between reinforcement and shuttering d. Water stopper or seals are introduced wherever required e. Vibrator & needle is functioning, adequate petrol is present at site. f. case of mass concreting(>50cum) space vibrator needle shall be g. plate vibrator shall be used for slab casting.00 h. Stripping time of form work is strictly regulated as follows in normal circumstances (where temperatures are above 20 deg .c) and where ordinary cement is used c. Wall column & vertical sides of beams : 16 to24 hrs ii. Soffit formwork to slabs (props to be refixed immediately after removal of formwork) :3 days iii. Soffit formwork to beams(props to be refixed immediately after removal of formwork) : 7 days iv. Props to slabs: 1) Spanning upto 4.5 m : 7 days 2) Spanning over 4.5m : 14 days v. Props to beams and arches 1) Spanning upto 6 m : 14 days 2) Spanning over 6m : 21 days	P V P P M P	Thermometer	B B B B B B	Drawing Drawing IS456 / Tech.Specn. IS456	100% 100% 100% 100% 100% 100%	Register				
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: CLASS #: A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE REVIEWED BY APPROVED BY APPROVAL SEAL					


 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32..		FIELD QUALITY PLAN SYSTEM: CIVIL WORKS SUB SYSTEM: CONCRETING/ TESTING			FQP No.: QPE-CL-0xx REV. No. : R01 PAGE No.: 15/19		AGENCY :M/s _____ PROJECT: NCTPS-2x600 MW S-2 PACKAGE: EPC AGREEMENT NO & DATE		
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)			
15.6	Ensure the following:										
	a. Concrete workability is in desired slump range.	P		B		100%					
	b. Concrete is transported/placed and compacted before expiry of initial setting time of cement and	P		B		100%					
	c. not disturbed subsequently	P		B	IS456	100%					
	d. Concrete is placed in uniform layers in quick succession, each of which is compacted by vibrator before placing next layer and no cold joints are formed	P		B							
	e. Curing of concrete	P		B							
16.0	Testing:										
	a) Twice a day for 7 days when ambient temp<35C										
	b) Twice a day for 7 days when temp>35 C.										
16.1	Ensure the adequate number of test specimen (Cubes) are 1-5 cum -1No, 6-15 cum - 2Nos, 16-30 cum -3Nos, 31-50cum - 4Nos, 51 and above cum - 4+1 extra per each 50cum. taken from mixed concrete and kept properly identified for purpose of testing as per specifications/standards (min 3 nos. for 7 days and 3 nos. for 28 days)	T	Steel Moulds	A	IS 456, 2911 & Tech. Specn.	IS 456	-				
16.2	Ensure that concrete cubes are tested at specified period and recorded as per standards	T	Compressive Test Machine	A	Annexure-III IS 516 IS 2911	100%					
16.3	Review of test results of concrete cubes to conform the specified grade of concrete is achieved.	R		A	Laboratory Test Results IS 516 IS 2911	100%	Protocol				
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: CLASS #: A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEER AND 'C' SHALL BE WITNESSED BY BY EXECUTION ENGINEER TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE REVIEWED BY APPROVED BY APPROVAL SEAL					

 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32.		FIELD QUALITY PLAN				AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE		
				SYSTEM: CIVIL WORKS SUB SYSTEM: WATER RETAINING STR./ WATER SUPPLY/ DRAINAGE AND SANITATION		FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 16/19				
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)		
18.0	Water Supply:						Protocol			
18.1	Check alignment level and grades of each laid length	M	Tape. Levelling instrument	B	Tech.Specn.	100%				
18.2	Ensure proper jointing of RCC pipes and curing.	V		B	Tech.Specn.	100%				
18.3	Ensure that the water supply lines are tested as per specifications.	P	Pressure gauge	A	Tech.Specn.	100%				
19.0	Drainage and Sanitation:						Protocol			
19.1	Check for alignment and slope	M	Levelling Instrument	B	Tech.Specn.	100%				
19.2	Ensure proper jointing of each laid length	V		B	Tech.Specn.	100%	-			
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: CLASS #: A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE				
						REVIEWED BY	APPROVED BY	APPROVAL SEAL		

 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32		FIELD QUALITY PLAN				AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE		
				SYSTEM: CIVIL WORKS SUB SYSTEM: DRAINAGE AND SANITATION/ FLOORING AND FINISHING WORKS/ WEATHERING COURSE		FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 17/19				
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)		
19.3	Ensure that water fill test is conducted to identify water leakage in joints for RCC / Stone Ware non-pressure pipes (testing of drainage pipe lines as per technical specification)	V		A	Tech.Specn.	100%				
19.4	Ensure that all pipes, fittings & fixtures are as per relevant code	V		A	Tech.Specn.	100%				
20.0	Flooring and Finishing Works:						Protocol			
20.1	Check for levels, slope	M	Water level	B	Drawings & Tech. Specn.	100%				
20.2	Ensure that the floors are chipped prior to commencement of actual finishing work	V	-	B	-	100%				
20.3	Ensure that the cement concrete floors are cured minimum for 7 days	V	-	B	IS 456 Technical spec.	100%				
20.4	Ensure that the tiled finished floors are polished as per the requirement	V	-	B	-	100%				
21.0	Weathering Course:						Protocol			
21.1	Check for slope	M	Water level	B	Drawings, Tech. Specn.	100%				
21.2	Check for joint finishing	V	-	B	-do-	100%				
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: <u>CLASS #</u> : A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND <u>TYPE @</u> : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE				
						REVIEWED BY	APPROVED BY	APPROVAL SEAL		

 FY CIVIL(DTQS)	SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32	FIELD QUALITY PLAN SYSTEM: CIVIL WORKS SUB SYSTEM: PLASTERING/ SUSPENDED CEILING/ BOUGHT OUT ITEMS FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 18/19				AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE								
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)						
22.0	Plastering:						Protocol							
22.1	Ensure that the thickness of plastering of brick walls shall be as per specification.	V/M	Tape	B	Drawings, Tech. Specn.	100%								
22.2	Ensure that the plastering of concrete ceiling 6mm thick (min) mortar	V/M	Tape	B	-do-	100%								
23.0	Suspended Ceiling:						Protocol							
23.1	Ensure that the false ceiling is done as per requirement of Tech. Specification and drawing	M/V	Tape	B	Drawing / Tech. Specn. IS:8183	100%								
24.0	Supply items:													
24.1	Check the supply time for completion of specification on the day of entry in to site.	V												
24.2	Record the credentials of supply items as per appendix-II along.	V												
24.3	Ensure that the rejected materials, if any are removed from the site premises within 2 days.	V												
24.1	Check the bought out items for their specification/IS codes before use.	R	Manufacturers certificate	B	Tech. Specn.	As per Tech. Specn.	Protocol							
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: <u>CLASS #</u> : A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND <u>TYPE @</u> : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td>REVIEWED BY</td> <td>APPROVED BY</td> <td>APPROVAL SEAL</td> </tr> </table>						REVIEWED BY	APPROVED BY	APPROVAL SEAL
REVIEWED BY	APPROVED BY	APPROVAL SEAL												

 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32.		FIELD QUALITY PLAN SYSTEM: CIVIL WORKS SUB SYSTEM: WALL & ROOF PERMANENTLY COLOUR COATED SHEETS/Thermal Insulation for Wall Cladding/ RECORDS				FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 19/19		AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE				
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)						
25.0	Wall & Roof Permanently Colour Coated Sheets: a. Dimensions and thickness and review of manufacturer's TCs b. Grade of galvanising / zinc aluminium alloy coating c. Type and thickness of paint for internal/external face for primer and finish coat d. Installation e. Alignment, laps. f. Type test for Hardness: Scratch Resistance/ Weathering Resistance Heat Resistance g. Colour match of batch & conformity with the Tech. Specn.	R		B	As per relevant Indian/ International Standard/ Tech.Specn. / Drawing	Each Lot	Test report/ TC							
26.0	Wall paneling: a. Ensure materials complying to space. b. Ensure uniform shade of material. c. Ensure line of wall paneling work.	R T V M		B	Tech. Specn.	100%	TC							
27.0	Laying of Flooring: -Ensure the specification on compliance of the tiles. -Ensure uniform shade of the tiles. -Ensure desired line and level of finished floor. -Ensure curing of tile work for 7 days.	T V M												
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: CLASS #: A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td>REVIEWED BY</td> <td>APPROVED BY</td> <td>APPROVAL SEAL</td> </tr> </table>						REVIEWED BY	APPROVED BY	APPROVAL SEAL
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 FY CIVIL(DTQS)		SUPPLIER'S NAME & ADDRESS BHEL, HPEP. RC PURAM HYDERABAD-32.		FIELD QUALITY PLAN SYSTEM: CIVIL WORKS SUB SYSTEM: COAL BUNKER FQP No. : QPE-CL-0xx REV. No. : R01 PAGE No.: 1				AGENCY :M/s _____ PROJECT: CONSTRUCTION OF PE & SD PACKAGE: EPC AGREEMENT NO & DATE						
SL NO.	CHARACTERISTICS	TYPE OF CHECK	INSTRUMENT	CLASS	REFERENCE DOCUMENT/ ACCEPTANCE STANDARD	QUANTUM/ FREQUENCY OF CHECK	FORMAT OF RECORD	REMARKS/ HOLD POINTS(H)						
28	Records: Prepared log sheets/protocols as per drawing and record the following: a. Orientation with coordinates b. Elevation/levels c. Stop d. Pitch/Diagonals e. Spacing/diagonals	V/M	Tape ,Dumpy level	A	Drawing	100%	Protocol							
Engineer FY CIVIL(DTQS) SIGNATURE		LEGEND: CLASS #: A= CRITICAL, B= MAJOR, C= MINOR; 'A' SHALL BE WITNESSED BY DTQS ENGINEER & EXECUTION ENGINEER, 'B' SHALL BE WITNESSED BY BY EXECUTION ENGINEERAND TYPE @ : V- VISUAL, R- RECORD VERIFICATION, M- MEASUREMENT, P- PHYSICAL & T- TEST.				FOR CUSTOMER USE <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td>REVIEWED BY</td> <td>APPROVED BY</td> <td>APPROVAL SEAL</td> </tr> </table>						REVIEWED BY	APPROVED BY	APPROVAL SEAL
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FY CIVIL(DTQS)

ANNEXURE - I**RECOMMENDED LABORATORY EQUIPMENTS/MEASURING DEVICES/INSTRUMENTS
FOR CIVIL WORKS**

DOC. NO. : QPE-CL-0xx

REV. NO. : R01

SHEET No.: 01 OF 02

SL NO.	BROAD CLASS	NOMENCLATURE DESCRIPTION	UTILITY	TEST PROCEDURE	CODE REF.	TO BE AVAILABLE AT SITE
1	Routine Test Lab. Equipments	1.1 Vicat Apparatus	Cement Consistence	Peneration of Std. Needle	IS 5513	Yes
		1.2 Lechatelier's test Apparatus/ Autoclave	Cement shrinkage	Size variation after curing of sample	IS 5514	Yes
		1.3 Mould (cement) (70.7x70.7x70.7mm)	Cement cubes	Cubes made of 1:3 cement: Sand	IS 10086	Yes
		1.4 Cement Mortar Mould Vibrator	Cube Compaction	Vibration for fixed duration	IS 10078	Yes
		1.5 Concrete cube mould (150x150x150)mm	Concrete cubes	--	IS 10086	Yes
		1.6 Compressive strength Testing machine	Concrete cube test	Crushing strength of cube	IS 2505	Yes
		1.7 Concrete slump cone	Workability check	Drop in cone height of concrete	IS 7320	Yes
		1.8 Coarse aggregate sieves	Sieve analysis	Sieving	IS 383	Yes
		1.9 Fine aggregate sieves	Sieve analysis	Sieving	IS 383	Yes
		1.10 Sieve shaker	Mechanical sieving	--		Yes
		1.11 Aggregate impact test machine	Impact value of aggregate	--	IS 9377	Yes
		1.12 Procter density set	Soil compaction		IS 2720	Yes
		1.13 Sand replacement set	Relative density		IS 2720	Yes



FY CIVIL(DTQS)

ANNEXURE-I**RECOMMENDED LABORATORY EQUIPMENTS/MEASURING DEVICES/INSTRUMENTS
FOR CIVIL WORKS**

DOC. NO. : QPE-CL-0xx

REV. NO. : R01

SHEET No.: 02 OF 02

SL NO.	BROAD CLASS	NOMENCLATURE DESCRIPTION	UTILITY	TEST PROCEDURE	CODE REF.	TO BE AVAILABLE AT SITE
2.0	Dimensional & Allied Measuring Equipment	2.1 Theodolite, levelling Instruments & levelling Staff, Total station	Levelling and centre line marking & verticality measurement	Measurements & recording	--	Yes
		2.2 Measuring tape	Dimension	--	--	Yes
3.0	Process Control Accessories	3.1 Oven	Material drying for moisture control	Material to be kept for specific duration		Yes
		3.2 Physical balance with weight	Weighing	--	--	Yes
		3.3 Platform weighing machine (1000 kgs capacity)	-do-	--	--	Yes



FYCIVIL(DTQS)

ANNEXURE – II

DOC. NO. : QPE-CL-0xx

REV. NO. : R01

SHEET NO. : **01 OF 01**

METHOD FOR DETERMINATION OF SLUMP OF CONCRETE

SLUMP TEST: As per IS 1199

OBJECTIVE: To determinate the workability of fresh concrete and to check the uniformity of concrete from batch to batch

TEST PROCEDURE:

- 1 Internal surface and mould should be cleaned thoroughly to make it free from moisture and any set concrete
- 2 The mould shall be placed on a smooth, horizontal rigid and non-absorbent surface (such as carefully leveled metal plate)
- 3 Cone shall be filled in four layers, each approximately one quarter of the height of the mould
- 4 Each layer shall be tamped with 25 strokes of the rounded end of the tapping rod in such a manner that the strokes are uniformly distributed over the cross section of the mould and for the second and subsequent layers the rod to be penetrated into the under laying layers
- 5 After the top layer has been rodded, the concrete shall be struck off level with a trowel or tapping rod
- 6 Leaked out mortar between the mould and the base plate is cleaned away
- 7 The mould should be removed from the concrete immediately by raising it slowly and carefully in a vertical direction
- 8 The slump shall be measured immediately. (The slump can be measured by keeping the tapping rod on the inverted mould and thus measuring the difference between the height of the mould and that of the highest point of the specimen being tested).

NOTE :

- i. The test is to be carried out at a place free from vibration or shock and within two minutes of sampling
- ii. Slump specimen which collapsed or sheared off laterally should be rejected and another test should be carried out
- iii. Actual slump to be recorded in log book.



FYCIVIL(DTQS)

ANNEXURE-III

DOC. NO. : QPE-CL-0xx

REV. NO. : R01

SHEET NO. : 01 OF 01

METHOD FOR DETERMINING THE COMPRESSIVE STRENGTH OF CONCRETE CUBES AS PER IS - 516

a. Age of Test

The age shall be calculated from the time of the addition of the water to the dry ingredients. The testing shall be carried out at the age of 7 days and 28 days.

b. Number of specimens:

Three specimens from different batches

c. Procedure

Specimens stored in water shall be tested immediately on removal from the water, in testing machine. The load shall be applied without shock and increased continuously at the rate of approx $140 \text{ kg/Cm}^2/\text{minute}$. Until the resistance of the specimen to the increasing load breaks down and no greater load can be sustained. The maximum load applied to the specimen shall then be recorded

d. Calculation

Compressive Strength (Kg/Cm^2) - Max. Load applied / Cross-sectional area



FY CIVIL(DTQS)

RECORD OF QUALITY CHECKS

SHEET NO. OF QPI	CHECK NO.	RESULTS ACHIEVED OK / NOT OK	DRAWING / DOCUMENT REFERENCE	FORMAT OF RECORD	INSPECTED BY SIGN. & DATE	CLEARED BY SIGN. & DATE	REMARKS

Note: Any protocol made is to be numbered & mentioned in "Format of Record" column.

		SYSTEM	SUB-SYSTEM	AREA	DOC. NO. : QPE-CL-0xx
PROJECT					REV. NO. : R01
UNIT NO.					LOG SHEET NO. : L-00
RATING					SHEET 1 / 1 SHEET



FY CIVIL(DTQS)

INSTRUMENT REGN.NO.

DATE OF INSPECTION

DRAWING / DOCUMENT REF.

METHODS OF DETERMINING THE GRADE OF THE SAND (FINE AGGREGATE)

Date of testing:

Weight of samples: _____ grams

Type of Aggregate:

Sl.No.	Retained on IS sieve No.	Weight Retained	% weight Retained	Cumulative % wt. Retained	% Passing
1	10 mm				
2	4.75 mm				
3	2.36 mm				
4	1.18 mm				
5	600 micron				
6	300 micron				
7	150 micron				
8	75 micron				

GRADING OF FINE AGGREGATE

IS Sieve Designation	% Passing for			
	Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
10 mm	100	100	100	100
4.75 mm	90-100	90-100	90-100	95-100
2.36 mm	60-95	75-100	85-100	95-100
1.18 mm	30-70	55-90	75-100	90-100
600 micron	15-34	35-59	60-79	80-100
300 micron	5-20	8-30	12-40	15-50
150 micron	0-10	0-10	0-10	0-15

			NAME	SIGNATURE & DATE	DOC.NO.: QPE-CL-0xx
PROJECT		INSPECTED BY			REV.NO.: R01
UNIT NO.		CLEARED BY			LOG SHEET NO.: L-01
RATING		CUSTOMER			SHEET 1 / 1 SHEET



FY CIVIL(DTQS)

INSTRUMENT REGN.NO.

DATE OF INSPECTION

DRAWING / DOCUMENT REF.

SIEVE ANALYSIS**METHOD OF DETERMINING THE GRADING OF COARSE AGGREGATE**

Date of testing:

Weight of samples: _____ grams


Type of Aggregate:

Sl.No.	Retained on IS sieve No.	Weight Retained	% weight Retained	Cumulative % wt. Retained	% Passing
1	40 mm				
2	20 mm				
3	16 mm				
4	12.5 mm				
5	10 mm				
6	4.75 mm				
7	2.36 mm				

GRADING OF COARSE AGGREGATE (IS 383)

IS Sieve Designation	% passing for graded aggregate of Nominal Size			
	40 mm	20 mm	16 mm	12.5 mm
40 mm	95-100	100	-	-
20 mm	30-70	95-100	100	100
16 mm	-	-	90-100	-
12.5 mm	-	-	-	90-100
10 mm	10-35	25-55	30-70	40-85
4.75 mm	0-5	0-10	0-10	0-10
2.36 mm	-	-	-	-

			NAME	SIGNATURE & DATE	DOC.NO.: QPE-CL-0xx
PROJECT		INSPECTED BY			REV.NO.: R01
UNIT NO.		CLEARED BY			LOG SHEET NO.: L-02
RATING		CUSTOMER			SHEET 1 / 1 SHEET

	INSTRUMENT REGN. NO.		
	DATE OF INSPECTION		
	DRAWING / DOCUMENT REF.		

METHOD FOR DETERMINATION OF CONSISTENCY OF CEMENT PASTRE

This method is for detemining the quantity of water required to prepare a cement paste of standard consistency. This can be performed by vicat apparatus.
Date of testing:

Reading prepared by analyst:

Weight of cement sample: _____ grams 500 grams for 80mm diameter vicat Mould

Quantity of water added: _____ ml

Time of gauging: _____ minutes 3 to 5 Minutes

Penetration of plunger of 10mm diameter: _____ mm 5 to 7mm from bottom of the mould

Formula : $\frac{\text{Water added} \times 100}{\text{Weight of Cement}}$

Consistency : %

		NAME	SIGNATURE & DATE	QP NO. : QPE-CL-0xx
PROJECT	INSPECTED BY			REV. NO. : R01
UNIT NO.	CLEARED BY			LOG SHEET NO. : L- 01
RATING	CUSTOMER			PAGE 1 OF 1



FY CIVIL(DTQS)

INSTRUMENT REGN.NO.

DATE OF INSPECTION

DRAWING / DOCUMENT REF.

COMPRESSIVE STRENGTH OF CEMENT / CEMENT CONCRETE

AGENCY :

LOCATION :

CUBE SIZE :

DATE & TIME OF CAST :

TYPE OF CEMENT :

GRADE OF CONCRETE :

WATER / CEMENT RATIO :

WEIGHT OF CUBES :

Sl. No.	Cube Mark	Test Date	7 days strength		28 days strength	
			Failure Load (KN)	Strength Kg/mm ²	Failure Load (KN)	Strength Kg/mm ²
1						
2						
3						
4						
5						
6						

Period**Specification****Actual (Average)**


7 days

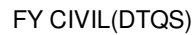
_____ Kg/mm²_____ Kg/mm²

28 days

_____ Kg/mm²_____ Kg/mm²

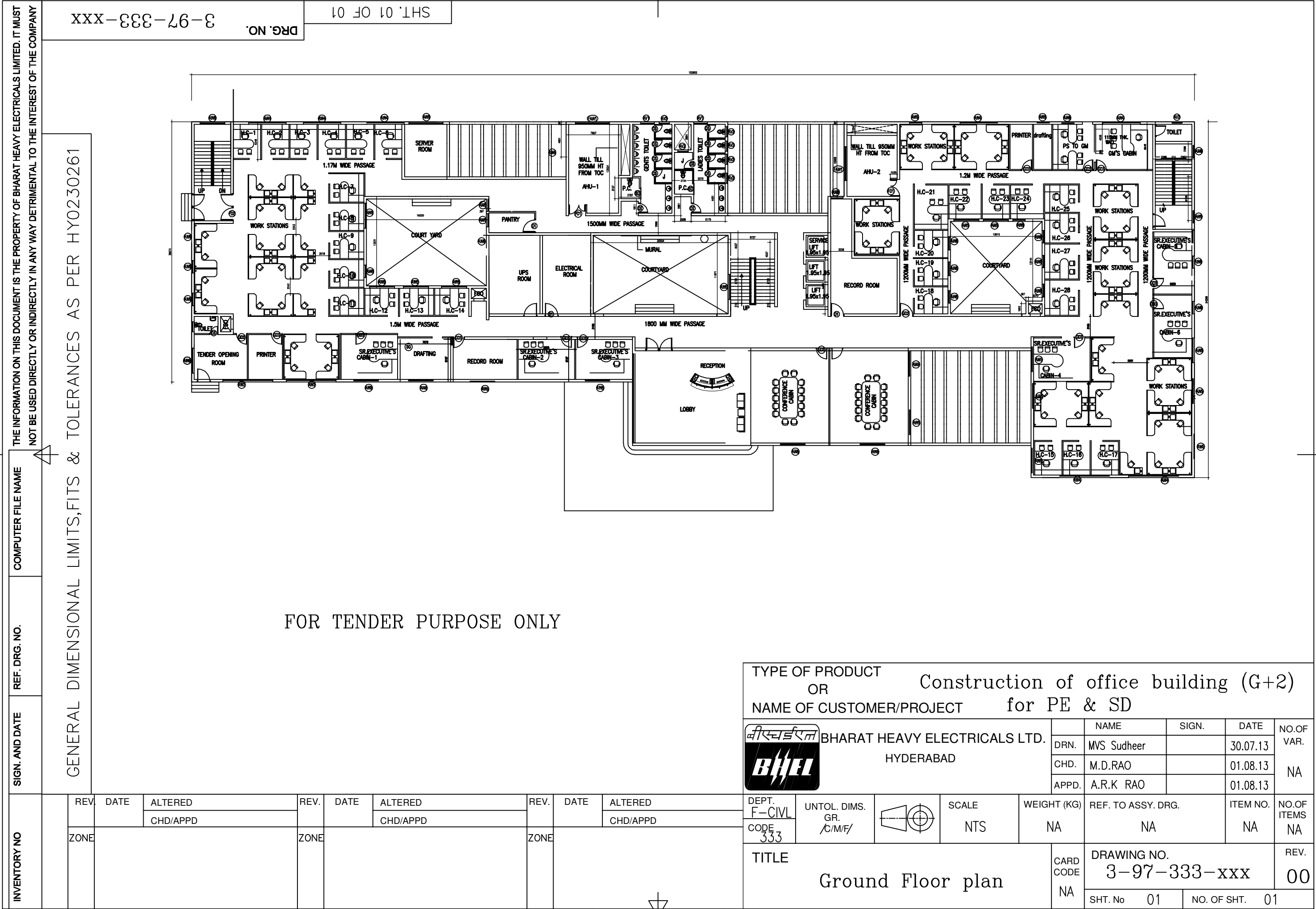
			NAME	SIGNATURE & DATE	DOC.NO.: QPE-CL-0xx
PROJECT		INSPECTED BY			REV.NO.: R01
UNIT NO.		CLEARED BY			LOG SHEET NO.: L-03
RATING		CUSTOMER			SHEET 1 / 1 SHEET


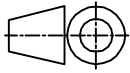
 FYCIVIL(DTQS)	INSTRUMENT REGN. NO.		
	DATE OF INSPECTION		
	DRAWING / DOCUMENT REF.		
METHOD FOR DETERMINATION OF INITIAL AND FINAL SETTINGS TIMES (VICAT APPARTUS)			
Date of Testing			
Weight of cement sample:_____grams		500 grams for 80mm diameter vicat Mould	
Quantity of water added:_____ml		85% of standard consistency	
<p>1. Initial setting time:</p> <p>Penetration of vicat needle of 1mm² 5+0.5 mm from the bottom of vicat mould</p> <p>Initial setting :_____ minutes /sec Total time taken from water addition to proper penetration of the needle.</p> <p>2. Final setting Time :</p> <p>Final setting time:_____minutes.sec Total time taken from water addition to failure of making outer impression on the surface of the cement specimen</p> <p>3. Specifications :</p> <p>Initial (minutes) Minimum 30 min (Ordinary Portland Cement, PPC)</p> <p>Final (minutes) Maximum 600 min (Ordinary Portland Cement, PPC)</p>			
		NAME	SIGNATURE & DATE
PROJECT	INSPECTED BY		
UNIT NO.	CLEARED BY		
RATING	CUSTOMER		
		QP NO. : QPE-CL-0xx	
		REV. NO. : R01	
		LOG SHEET NO. : L- 02	
		PAGE 1 OF 1	



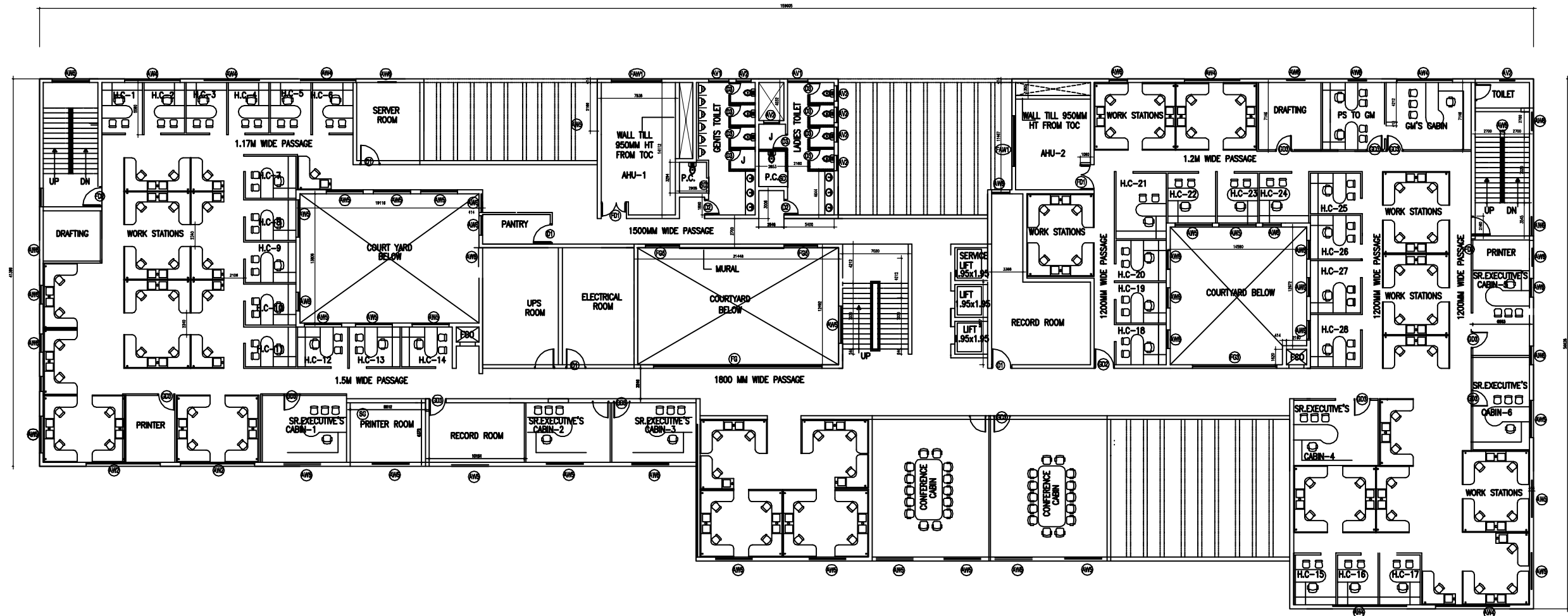
In the Field Quality Plan for (FQP), following Checks / Log sheets may be added / rewritten / deleted (cannot be carried out / not required) due to reasons as mentioned below:

[illegible]


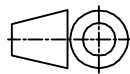


TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		Construction of office building (G+2) for PE & SD					
 BHARAT HEAVY ELECTRICALS LTD. HYDERABAD			NAME	SIGN.	DATE	NO.OF VAR.	
		DRN.	MVS Sudheer		30.07.13	NA	
		CHD.	M.D.RAO		01.08.13		
		APPD.	A.R.K RAO		01.08.13		
DEPT. F-CIVIL	UNTOOL. DIMS. GR. /C/M/F/		SCALE NTS	WEIGHT (KG) NA	REF. TO ASSY. DRG. NA	ITEM NO. NA	NO.OF ITEMS NA
CODE 333							
TITLE First Floor plan				CARD CODE NA	DRAWING NO. 3-97-333-xxx		REV. 00
					SHT. No 01	NO. OF SHT. 01	

GENERAL DIMENSIONAL LIMITS, FITS & TOLERANCES AS PER HY0230261



FOR TENDER PURPOSE ONLY

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		Construction of office building (G+2) for PE & SD					
 BHARAT HEAVY ELECTRICALS LTD. HYDERABAD			NAME	SIGN.	DATE	NO.OF VAR.	
		DRN.	MVS Sudheer		30.07.13	NA	
		CHD.	M.D.RAO		01.08.13		
		APPD.	A.R.K RAO		01.08.13		
DEPT. F-CIVIL	UNTOOL. DIMS. GR. /C/M/F/		SCALE NTS	WEIGHT (KG) NA	REF. TO ASSY. DRG. NA	ITEM NO. NA	NO.OF ITEMS NA
CODE 333							
TITLE Second Floor plan				CARD CODE NA	DRAWING NO. 3-97-333-xxx		REV. 00
					SHT. No 01		NO. OF SHT. 01