



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

[A Government of India Enterprises]

TENDER NO.:

BCPL/DIB/C&P/SER/20120125/MD

BID DOCUMENT

FOR

**NAME OF : EXTERNAL WATER SUPPLY AT BCPL AND CISF TOWNSHIP,
WORK OVERHEAD AND UNDER GROUND WATER TANK, PUMP HOUSE,
SECURITY OFFICE AND TELECOM/IT EQUIPMENT ROOM AT BCPL
TOWNSHIP AND SUBSTATION AT BCPL AND CISF TOWNSHIP FOR
M/S BRAHMAPUTRA CRACKER & POLYMER LIMITED AT
LEPETKATA, DIBRUGARH, (ASSAM)**

Consultant:



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Project Office: Main Fire Station Building, P.O. Lepetkata, Dibrugarh - 786006 Tel: 0373- 2914611
Project Execution office: 3rd Floor, GTI; 24, Sector 16A; NOIDA201 301: Tel: 0120 2513102
www.bcplindia.co.in

CUT-OUT SLIP

(OUTER ENVELOPE)

DO NOT OPEN

NAME OF WORK:

EXTERNAL WATER SUPPLY OF BCPL AND CISF TOWNSHIP,
OVERHEAD AND UNDER GROUND WATER TANK, PUMP
HOUSE, SECURITY OFFICE AND TELECOM/IT EQUIPMENT
ROOM AT BCPL TOWNSHIP AND SUBSTATION AT BCPL AND
CISF TOWNSHIP FOR M/S BRAHMAPUTRA CRACKER &
POLYMER LIMITED AT LEPETKATA, DIBRUGARH, ASSAM

TENDER NO. : BCPL/DIB/C&P/SER/20120125/MD

SUBMISSION DUE DATE : 28/12/2012 , 14.30Hrs
& TIME

FROM:

Name:
Address:

TO:

SR. MANAGER (C&P)
CENTRAL WARE HOUSE
BCPL PROJECT SITE, LEPETKATA
DIBRUGARH-786006
ASSAM

(To be pasted on the outer envelope containing “Priced” & “Unpriced” bids

MASTER INDEX

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REQUEST FOR QUOTATION

(Tender no BCPL/DIB/C&P/SER/20120125/MD)

Sealed Bid under single stage two envelop system is invited for the following works for **BRAHMAPUTRA CRACKER & POLYMER LIMITED, AT LEPETKATA, DIBRUGARH, ASSAM.**

A)	NAME OF WORK	:	EXTERNAL WATER SUPPLY AT BCPL AND CISF TOWNSHIP, OVERHEAD AND UNDER GROUND WATER TANK, PUMP HOUSE, SECURITY OFFICE AND TELECOM/IT EQUIPMENT ROOM AT BCPL TOWNSHIP AND SUBSTATION AT BCPL & CISF TOWNSHIP FOR M/S BRAHMAPUTRA CRACKER & POLYMER LIMITED AT LEPETKATA, DIBRUGARH, ASSAM
B)	CONTRACT PERIOD	:	08 MONTHS
C)	BIDDING DOCUMENT FEE (NON REFUNDABLE)	:	NOT APPLICABLE
D)	EARNEST MONEY DEPOSIT	:	₹. 6,00,000.00 (in favour of "Brahmaputra Cracker & Polymer Ltd.", payable at Dibrugarh (Assam) However, PSUs are exempted from payment of tender fee.
E)	PRE-BID CONFERENCE	:	AT. 14/12/2012 Hrs on 3.00PM, in CENTRAL WARE HOUSE BCPL office at Dibrugarh.
F)	DATE & TIME FOR RECEIPT OF BID	:	28/12/2012 up to 14.30 Hrs.
G)	DATE & TIME FOR OPENING OF BID	:	28/12/2012 at 15.00 Hrs. in the presence of bidder's representatives.
H)	PLACE & SUBMISSION OF BID	:	SR. MANAGER (C&P), CENTRAL WARE HOUSE, BCPL PROJECT SITE PO – BARBARUAH, LEPETKATA-786006 DIBRUGARH, ASSAM

The Earnest Money Deposit (EMD) for the amount as mentioned above shall be submitted in the form of crossed Bank Demand Draft drawn on any Nationalized/Scheduled bank in favour of Brahmaputra Cracker & Polymer Limited, payable at State Bank of India, Dibrugarh, Assam. Alternatively, Earnest Money deposit may also be submitted through Bank Guarantee from any Indian Scheduled Bank or a branch of an International Bank situated in India and registered with Reserve Bank of India as scheduled foreign bank in the proforma attached with the Tender Document. However, other than the Nationalized Indian Banks, the banks whose BGs are furnished must be commercial banks having net worth in excess of ₹. 100 crores and a declaration to this effect should be made by such commercial bank either in the bank guarantee itself or separately on a letter head.

The complete bidding document is also available on the website of GAIL (www.gailonline.com) and BCPL (www.bcplonline.co.in), bidders and desirous may submit their bid along with the Techno-Commercial Bid.

SUBMISSION OF BIDS:

The Bid shall be submitted in the following manner in separately sealed envelopes duly super scribed:

a) PART – I : TECHNICAL AND UNPRICED COMMERCIAL PART

b) PART – II: PRICE PART

PART – I of the bid shall contain the following:

- a) Bid/Offer in hard copy as per the requirement of the Bidding Document duly signed and stamped on each page.
- b) Master Index enclosed with Request for Quotation duly signed and stamped by the bidders in token of having received and read all parts of bidding documents and having accepted and considered the same in preparing and submitting the bid.
- c) Earnest Money deposit as specified in Instructions to Bidders (ITB)

PART – II of the bid shall contain the following:

Bidder shall fill price in Schedule of Prices. In this part of bid, the bidder shall not stipulate any conditions. There shall not be any over writing.

BIDDERS EVALUATION CRITERIA FOR THIS TENDER WILL BE AS UNDER:

The bidder shall meet the following Experience and Financial Criteria.

a) Experience Criteria:

TECHNICAL:-

- i) Bidder should have experience to execute at least one single contract of **RCC over head tank including related civil and piping works** of value not less than **₹. 119.20 lacs (RS. ONE HUNDRED NINETEEN POINT TWO LACS ONLY)** during the last seven years.

“OR”

Two separate executed contract of **RCC over head tank including related civil and piping works** of value not less than **₹. 89.40 lacs (RUPEES EIGHTY NINE POINT FOUR LACS ONLY)** in each case in the previous seven years to be reckoned from the due date of submission.

- ii) The bidder should have valid E.P.F. Registration no. / Certificate and copy (duly attested) of the same should be submitted along with their un-priced offer at the time of submission of bid.
- iii) The evaluation of all responsive bids shall be done on overall lowest Techno-Commercially acceptable bid basis.

In case of Sub-contractor, bidder shall be required to furnish the following attested/ notarized documents in support of meeting the above “Experience Criteria.”

- A) Copy of work order mentioning detailed scope of work along with SOR issued by main contractor.
- B) Copies of Completion Certificate from the end User / Owner and also from the main contractor. The Completion Certificates shall have details like work order no. / date, brief scope of work, ordered & executed value of the job, completion date etc.

(All documents duly attested by Gazetted Officer/Officer of Public Sector Enterprises/ Notary Public towards the proof of meeting the Bid Evaluation Criteria.)

FINANCIAL:-

- i) The annual turnover of the bidder should be minimum **₹. 149.0 lacs (RUPEES ONE FOURTY NINE LACS ONLY)** in any of the preceding three financial years. (FY 2009-10, 2010-11 & 2011-12)

- ii) The financial Net Worth of the bidder should be positive as per the latest Audited Financial Statement i.e. FY 2011-12.
- iii) The bidder should have minimum working capital of ₹. **29.8 lacs (RUPEES TWENTY NINE POINT EIGHT LACS ONLY)** as per the latest audited financial year i.e. FY 2011-12. If the bidder's working capital is inadequate, the bidder shall supplement this with a letter issued by their Banker having net worth not less than ₹. **100 Crore or US \$ 22 million**, confirming the availability of line of credit to meet the above specified working capital requirement.

The bidder shall furnish all necessary documents such as work order(s), completion certificate, audited annual reports including audited balance sheet, profit & loss account etc. towards the proof of meeting the Bid Evaluation Criteria. All the documents should be duly attested by Gazetted Officer/Officer of Public Sector Enterprises/ Notary Public.

For submission of audited annual reports including audited balance sheet, profit & loss account etc., the preceding three years covers the FY 2009-10, 2010-11 & 2011-12. However, it is mandatory to submit the audited annual reports including audited balance sheet, profit & loss account etc. for FY 2009-10, 2010-11 & 2011-12 .

SUBMISSION OF ATTESTED COPIES OF CERTIFICATES / DOCUMENTARY EVIDENCES

The bidders are required to submit the copies of all certificates/documentary evidences as mentioned above duly **attested by Gazetted Officer/ Officer of Public Sector Enterprises/ notary public** towards the proof of meeting the Bid Evaluation Criteria (BEC) as stated above:

- **Attested copies of all the relevant documents viz. Work Order(s), Execution Certificate(s), Annual Report / Balance Sheet and Profit & Loss Account and other documents as mentioned in Exhibit 'A'.**
- **Attested copy (ies) of partnership deed (in case of partnership firm) and power of attorney.**
- **Attested copy of P. F. certificate**
- **Attested copy of PAN Card**
- **Affidavit duly notarized, as per clause no. 38.2 of Special conditions of Contract Part-A.**
- **An undertaking (by the bidders who quotes by down loading the tender from web site) stating that "The contents of the Tender Document have not been modified or altered by M/s (Name of the bidder with complete address). In case, it is found that the tender document has been modified / altered by the bidder, the bid submitted by the M/s (Name of the bidder) shall be liable for rejection".**

Non-submission of the attested copies of the requisite certificates/documents shall render the bid non-responsive and shall be liable for rejection.

Please note that this is a zero deviation tender. Bidders are advised to strictly confirm compliance to tender conditions and not to stipulate any deviation / conditions in their offer. Subsequent to bid submission, BCPL will not seek confirmations / clarifications and any bid(s) not in line with tender conditions shall be liable for rejection. Bidders are also requested to submit the documents / confirmations strictly as per the check list enclosed in the tender document.

Bids complete in all respect must reach this office not later than 14.30 hrs on the notified date of closing of the tender.

All out-station bids, if sent by post, should be sent under registered cover. Any excuse regarding late delivery of bid due to any reason whatsoever will not be entertained.

Bidders may depute their authorized representative to attend the bid opening. Bidders selected for opening of their priced bid shall be informed about the date and time of price bid opening.

Any change in bid after due date of submission of tender will not be considered.

Bidders are advised in their own interest to ensure that their bids reach this office well before the closing date and time of the tender as the bids received after the closing date and time of the tender will not be considered.

Please confirm that you have received the tender document and will be quoting for the tender items/jobs. In case you are not quoting for the same, please return complete set of tender documents.

The Bidder is required to submit the bid along with their covering letter under letter head disclosing the name and designation of authorized person signing the bid, complete postal address of firm / company, telephone no., fax no., e-mail etc.

Brahmaputra Crackers & Polymers Ltd. reserves the right to accept or reject any or all bids received, at its absolute discretion, without assigning any reason whatsoever.

You are requested to depute your representative along with authorization letter at the time of bid opening.

Thanking you,

For Brahmaputra Cracker & Polymer Limited

(M. J. Duarah)
Dy. Manager (**C&P**)
Ph no: 0373-2914611
Mobile no: 9435139382
E-mail id: mjduarah@bcplindia.co.in

NOTE:

1. Bidders are requested to fill all the Annexure as enclosed in the tender documents.
2. Bidders must sign & stamp on each page of tender document.

CONFIRMATION OF BIDDERS FOR MEETING BEC AND OTHER REQUIREMENTS OF TENDER

NAME OF WORK	:	EXTERNAL WATER SUPPLY AT BCPL AND CISF TOWNSHIP, OVERHEAD AND UNDER GROUND WATER TANK, PUMP HOUSE, SECURITY OFFICE AND TELECOM/IT EQUIPMENT ROOM AT BCPL TOWNSHIP AND SUBSTATION AT BCPL & CISF TOWNSHIP FOR M/S BRAHMAPUTRA CRACKER & POLYMER LIMITED AT LEPETKATA, DIBRUGARH, ASSAM
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TENDER NO: BCPL/DIB/C&P/SER/20120125/MD

SN	TENDER REQUIREMENT	BIDDER'S REPLY / CONFIRMATION
1	Bidder should have experience to execute at least one single contract of RCC over head tank including related civil and piping works of value not less than Rs. 119.20 lacs (RS. ONE HUNDRED NINETEEN POINT TWO LACS ONLY) during the last seven years. “OR” Two separate executed contract of RCC over head tank including related civil and piping works of value not less than Rs. 89.40 lacs (RUPEES EIGHTY NINE POINT FOUR LACS ONLY) in each case in the previous seven years to be reckoned from the due date of submission. In case of Sub-contractor, bidder shall be required to furnish the following attested/ notarized documents in support of meeting the above “Experience Criteria.” - Copy of work order mentioning detailed scope of work along with SOR issued by main contractor. - Copies of Completion Certificate from the end User / Owner and also from the main contractor. The Completion Certificates shall have details like work order no. / date, brief scope of work, ordered & executed value of the job, completion date etc. (All documents duly attested by Gazetted Officer/Officer of Public Sector Enterprises/ Notary Public towards the proof of meeting the Bid Evaluation Criteria.)	Reference of attested copies of documents furnished: 1.
2	<u>FINANCIAL:-</u> - The annual turnover of the bidder should be minimum Rs. 149.0 lacs (RUPEES ONE FOURTY NINE LACS ONLY) in any of the preceding three financial years. (FY 2009-10, 2010-11 & 2011-12) - The financial Net Worth of the bidder should be positive as per the latest Audited Financial Statement i.e. FY 2011-12. - The bidder should have minimum working capital of Rs.	Reference of attested copies of documents furnished: FY 2011-12 FY 2010-11

	29.8 lacs (RUPEES TWENTY NINE POINT EIGHT LACS ONLY) as per the latest audited financial year i.e. FY 2011-12. If the bidder's working capital is inadequate, the bidder shall supplement this with a letter issued by their Banker having net worth not less than ₹. 100 Crore or US \$ 22 million , con forming the availability of line of credit to meet the above specified working capital requirement.	3. FY 2009-10 Form-I duly filled in submitted: Yes/No
3	The bidder should have valid E.P.F. Registration no. / Certificate and copy (duly attested) of the same should be submitted along with their un-priced offer at the time of submission of bid.	Reference of attested copies of documents furnished:
4	Affidavit duly notarized, as per clause no. 38.2 of Special conditions of Contract Part-A	Reference of document
5	<u>Power of Attorney</u> in favour of person who has signed the offer in stamp paper of appropriate value.	Reference of document
6	An undertaking by the bidders (who quotes by down loading the tender from web site) as instructed in the Page no.3 of RFQ.	Reference of document furnished 1.
7	Attested copy of PAN Card	
8	The evaluation of all responsive bids shall be done on overall lowest Techno-Commercially acceptable basis.	

Note:

Please note that the documents listed by you above only shall be considered for evaluation of your claim of meeting Bidder Evaluation Criteria & other requirements of the tender. Any other documents, not included above shall not be considered. Further please note that all the documents submitted should be attested by a Gazetted officer / officer of Public Sector Enterprises/ Notary public.

For submission of audited annual reports including audited balance sheet, profit & loss account etc., the preceding three years covers the FY 2009-10, 2010-11 & 2011-12. Similarly, latest Audited Financial Statement means 2011-12 .

Date:

Bidder's signature_____

CHECK LIST FOR SUBMISSION OF DOCUMENTS

Bidder is requested to fill this check list and ensure that all detail / documents have been furnished as called for in the Bidding Document along with duly filled in, signed & stamped checklist with each copy of the "Un-priced bid (Part-I)".

Please tick the box and ensure compliance:

SL. NO.	DETAILS OF DOCUMENTS	BIDDER'S CONFIRMATION
01.	EMD OF REQUISITE AMOUNT IS SUBMITTED IN THE FORM OF DD/BG FROM ANY SCHEDULED BANK AS MENTIONED IN RFQ.	EITHER DEMAND DRAFT DD NO. _____ DATED: _____ DRAWN ON: _____ OR BANK GUARANTEE BG NO. _____ DATED: _____ VALID UPTO: _____ (BG VALID UPTO 06 MONTHS FROM THE DUE DATE OF SUBMISSION OF BID)
02.	SUBMISSION OF DOCUMENTS AS PER EXHIBIT 'A' DULY FILLED IN SUBMITTED.	
03.	VALIDITY OF OFFER IS UP TO FOUR (04) MONTHS FROM THE DATE OF SUBMISSION OF TECHNO-COMMERCIAL PART.	YES VALID UPTO: _____
04.	POWER OF ATTORNEY IN FAVOUR OF PERSON WHO HAS SIGNED THE OFFER IN STAMP PAPER OF APPROPRIATE VALUE.	
05.	PARTNERSHIP DEED IN CASE OF PARTNERSHIP FIRM AND ARTICLES OF ASSOCIATION IN CASE OF LIMITED COMPANY.	
06.	COPY OF THE P. F. REGISTRATION CERTIFICATE ISSUED BY THE P. F. AUTHORITIES.	YES EPF REGISTRATION NO: _____
07.	ORIGINAL BIDDING DOCUMENT ALONG WITH BLANK (UN-PRICED) COPY (2 NOS) OF PRICE BID (SCHEDULE OF RATES) AND ADDENDUM, IF ANY.	
08.	NO DEVIATION CONFIRMATION IN THE PROFORMA ENCLOSED.	
09.	AFFIDAVIT DULY NOTARIZED, AS PER CLAUSE NO. 38.2 OF SPECIAL CONDITIONS OF CONTRACT PART – A.	
10.	ALL PAGES / DOCUMENTS ARE STAMPED AND SIGNED BY THE AUTHORIZED SIGNATORY OF THE BIDDER TOWARDS ACCEPTANCE OF TERMS AND CONDITIONS OF THE TENDER.	
11.	COPY OF PAN CARD DULY ATTESTED.	

SIGNATURE OF BIDDER : _____
NAME OF BIDDER : _____
COMPANY SEAL : _____

FORM - 1
ANNUAL TURNOVER

Annual Turnover data for the last 3 years:

YEAR	AMOUNT
YEAR 1: FINANCIAL YEAR : 2011-2012	
YEAR 2: FINANCIAL YEAR : 2010-2011	
YEAR 3: FINANCIAL YEAR : 2009-2010	

1. The information supplied should be the Annual Turnover of the bidder.
2. A brief note should be appended describing thereby details of turnover as per audited results.

For submission of audited annual reports including audited balance sheet, profit & loss account etc., the preceding three years covers the FY 2009-10, 2010-11 & 2011-12.

SEAL AND SIGNATURE OF THE BIDDER

FORM – II

FINANCIAL SITUATION

BIDDER MUST FILL THIS FORM

FINANCIAL DATA FOR LAST AUDITED FINANCIAL YEAR

DESCRIPTION	FINANCIAL YEAR- 2011-2012 AMOUNT
1. CURRENT ASSETS	
2. CURRENT LIABILITIES	
3. WORKING CAPITAL (CURRENT ASSETS LESS CURRENT LIABILITIES)	
4. NET WORTH OWNERS FUNDS (PAID UP SHARE CAPITAL AND FREE RESERVES & SURPLUS) (NW)	
5. PROFITS BEFORE TAXES (PBT)	
6. RETURN. ON EQUITY (PBT / NW) X 100	

1. Attached are copies of the audited balance sheets, including all related notes and income statement for the **last Audited Financial year**, as indicated above, complying with the following conditions:-
 - All such documents reflect the financial situation of the bidder
 - Historic financial statements must be audited by a certified accountant.
 - Historic financial statements must be complete, including all notes to the financial statements.
 - Historic financial statements must correspond to accounting periods already completed and audited (no statement for partial periods shall be requested or accepted)

For submission of audited annual reports including audited balance sheet, profit & loss account etc., the preceding three years covers the FY 2009-10, 2010-11 & 2011-12.

SEAL AND SIGNATURE OF BIDDER

ACKNOWLEDGEMENT CUM CONSENT LETTER

(Within 7 days of receipt of Bidding document, Bidder shall acknowledge the receipt and confirm his intention to Bid against the enquiry/tender through e-mail to or per return FAX by filling up the this Format.)

To,
Sr. Manager (C&P)
CENTRAL WARE HOUSE
BCPL Project Site
Lepetkata-786006
Dibrugarh, Assam

SUBJECT: TENDER NO.: BCPL/DIB/C&P/SER/20120125/MD

Dear Sir,

We hereby acknowledge receipt of a complete set of bidding document along with enclosures for subject item/work.

We undertake that the contents of the above bidding document shall be kept confidential and further that the drawings, specifications and documents shall not be transferred and that the said documents are to be used only for the purpose for which they are intended.

- A) We intend to bid as requested for the subject item/work and furnish following details with respect to our quoting office:

(i) Postal Address with PIN Code :

.....

.....

(ii) Telephone Number :

(iii) Telefax Number :

(iv) Contact Person :

(v) E-mail Address :

(vi) Mobile Number :

- B) Details of Contact person:

(i) Postal Address with PIN Code:

.....

.....

(ii) Telephone Number :

(iii) Fax Number :

(iv) Contact Person :

(v) E-mail Address :

(vi) Mobile Number :

- C) We are unable to bid for the reasons given below and we are returning back the entire set of bidding documents.

Reasons for non-submission of bid:

Agency's Name :

Signature :

Name :

Designation :

Date :

Seal/Stamp :

CERTIFICATE FROM BIDDER / STATUTORY AUDITOR/CHARTERED ACCOUNTANT

(ALL THE CERTIFICATES SHOULD BE IN LETTER HEADS OF RESPECTIVE BIDDER / STATUTORY AUDITOR/CHARTERED ACCOUNTANT)

- (i) Covering letter from Statutory Auditor/Chartered Accountant.
- (ii) Format-A for Ownership/Possession of Equipment/Vehicles.
- (iii) Format-B for Financial Capacity and Experience Criteria for Hiring of Legal or similar consultant.
- (iv) Format-C for Details of Similar Supply of Goods. Works/Services in past 07 years and certification from a Chartered Accountant in case audit of accounts is not mandatory as per Law (present ceiling of Annual Turnover is ₹. 40 Lakhs in India).
- (v) Format-D for Details of Similar Supply of Goods/Works/Services in past 07 years and certification from a Statutory Auditor who audits Annual accounts of bidder.
- (vi) Format-E for Details of Financial Capability of the bidder.

(COVERING LETTER ON LETTER HEAD)

To,

Date:

Sub: Certificate regarding.....

Dear Sir,

We..... (Name of Statutory Auditor/Chartered Accountant) are the Statutory Auditor/Chartered Accountant of M/s..... (name of bidder).

We hereby confirm that we have issued following certificate:

- 1.
- 2.
- 3.

Thanking You,

Place
Date

(Signature)
Name of Authorized Signatory
Membership no.:

Encl: As above

Note:

Bidder whose accounts are not audited by auditors as per Law/Jurisdiction, certification from a Chartered Accountant to be submitted.

FORMAT FOR CERTIFICATION FROM STATUTORY AUDITOR/CHARTERED ACCOUNTANT* (FOR OWNERSHIP/POSSESSION OF EQUIPMENT/VEHICLES)

Certificate from the Statutory Auditor/Chartered Accountant* regarding Ownership/Possession

Based on the books of accounts and other published information authenticated by.....(name of the Bidder), this is to certify that.....(name of the Bidder) located at.....(address) owns the title/possess (strike out whichever is not applicable) the equipment/vehicles as per enclosed list.

Further, M/s..... (Name of the Bidder) have been undertaking.....services/operations (name of the services) since..... (Mention the number of years in operation).

Name of Audit Firm/:
Chartered Accountant
Date:

[Signature of Authorized Signatory]
Name:
Designation:
Seal:
Membership no.

Note:

- (i) List of Equipment owned by the bidder to be enclosed along with certificate must indicate capacity/make/model etc. Further the list should also be signed by the Statutory Auditor/Chartered Accountant* who is issuing the above certificate.
- (ii) List of Vehicles owned by the bidder to be enclosed along with certificate must indicate Registration number/make/model/year etc. Further the list should also be signed by the Statutory Auditor/Chartered Accountant* who is issuing the above certificate.
- (iii) *Bidder whose accounts are not audited by auditors as per law/jurisdiction, certification from a Chartered Accountant to be submitted.

FORMAT FOR CERTIFICATE FROM STATUTORY AUDITOR/CHARTERED ACCOUNTANT* (APPLICABLE FOR HIRING OF LEGAL OR SIMILAR CONSULTANTS)
i) FORMAT FOR ASCERTAINING THE FINANCIAL CAPACITY OF THE CONSULTANT:

S. N.	FINANCIAL YEAR	CONSULTANCY REVENUE/TURN OVER (SPECIFY CURRENCY AND AMOUNT)
1.		
2.		
3.		

Certificate from the Statutory Auditor/Chartered Accountant*

This is to certify that.....(name of the Bidder) has Consultancy Revenue/Turn over in the respective years as shown above.

Name of Audit Firm/
Chartered Accountant
Date:

[Signature of Authorized Signatory]
Name:
Designation:
Seal:
Membership no.

* Bidder whose accounts are not audited by auditors as per Law/Jurisdiction., certification from a Chartered Accountant to be submitted.

ii) Format for ascertaining the Experience Criteria of Consultant#:

S.N.	NAME OF CLIENT	NAME OF JOB/CONTRACT	ESTIMATED VALUE OF CONTRACT (SPECIFY CURRENCY & AMOUNT)	PAYMENT OF CONSULTANCY REVENUE RECEIVED BY THE APPLICANT (SPECIFY CURRENCY & AMOUNT) (IF APPLICABLE)
(1)*	(2)	(3)	(4)	(5)
1				
2				
3				

Applicant should provide details of only that Consultancy Job that have been undertaken by it under its own name.

* The names and chronology of Consultancy Job included here should conform to the project-wise details.

Certificate from the Statutory Auditor/Chartered Accountant*

This is to certify that the information contained in Column 5 above is correct as per the accounts of the Applicant and/or the client.

Name of Audit Firm/
Chartered Accountant
Date:

[Signature of Authorized Signatory]

Name:
Designation:
Seal:
Membership no.

* Bidder whose accounts are not audited by auditors as per Law/Jurisdiction, certification from a Chartered Accountant to be submitted.

FORMAT FOR CERTIFICATE FROM CHARTERED ACCOUNTANT FOR DETAILS OF SIMILAR SUPPLY OF GOODS/WORKS/SERVICES IN PAST 07 YEARS.

(Applicable for cases where bidder's account are not audited by Statutory Auditor as per Law/Jurisdiction)

NAME OF THE WORK	
NAME, ADDRESS AND CONTACT DETAILS OF CLIENT	
P.O. / W.O NO.	
SCOPE OF WORK OF BIDDER	
DATE OF COMMENCEMENT OF THE PROJECT/WORK	
DATE OF COMPLETION OF THE PROJECT/WORK	
TOTAL EXECUTED VALUE FROM THE PROJECT/WORK (SPECIFY CURRENCY AND AMOUNT)	

- (i) Copies of Letter of awards/Order/Work Orders and completion certificate (in case of works/services) or IRN/Proof of delivery (in case of supplies, if applicable) to be enclosed.
- (ii) The Supply/Work/Services completed earlier than 07 years need not be indicated here.
- (iii) The list of Supply/Work/Services, not of similar nature need not be indicated here. Failing to comply aforementioned instructions may lead to rejection of bid.

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:

Date:

Place:

FORMAT FOR CERTIFICATION BY CHARTERED ACCOUNTANT

Certificate from the Chartered Accountant regarding Supply of Good/Works/Services

Based on its books of accounts and other published information authenticated by it, (this is to certify that LOA/PO/WO No.....dated.....was awarded to.....(name of the Bidder) by(Name of Client) to execute.....(name of Supply/work/Service). The Supply/Works/Services commenced on..... (Date) and was/is likely to be completed on..... (Date, if any). It is certified that the total value of contract/order executed by.....(name of bidder) was(Specify Currency and amount) and executed value was.....(Specify Currency and amount).

Name of Audit Firm/:
Chartered Accountant
Date:

[Signature of Authorized Signatory]

Name:
Designation:
Seal:
Membership no.

FORMAT-D**FORMAT FOR CERTIFICATE FROM STATUTORY AUDITOR FOR DETAILS OF SIMILAR GOODS/WORK/SERVICES SUPPLIED/DONE DURING PAST 07 YEARS.****(Applicable in all cases where bidder's accounts are audited by Statutory Auditor)**

S. No.	Description of the Goods/Works/Services	LOA/PO/WO No. and date	Full Postal Address & phone nos. of Client. Name, designation and address of Engineer/Officer-in-Charge (for cases other than purchase)	Value of Contract/Order (Specify Currency Amount)	Date of Commence-ment of Work/Services or supply of goods	Scheduled Completion Time (Months) Delivery Schedule	Date of Actual Completion/ Supply	Reasons for delay in execution, if any
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Pl refer instruction								

Place:

[Signature of Authorized Signatory of Bidder]
Name

Designation:

Date:

Seal:

Instructions:

1. Copies of Letter of awards/Order/Work others and completion certificate (in case of works/services) or IRN/Proof of delivery (in case of supplies, if applicable) to be enclosed.
2. The Supply/work/Services completed earlier than 07 years need not be indicated here.
3. The list of Supply/Work/Services, not of similar nature need not be indicated here. Failing to comply aforementioned instructions may lead to rejection of bid.
4. Bidders are expected to provide details in respect of each Order in this Annex. The orders cited must comply with the Bid Evaluation criteria specified in Tender Document. Details provided in this section are intended to serve as a backup for information provided in Offer/Quotation. Bidder should also refer to the Instructions below.
5. A separate sheet should be filled for each LOA/Work Order/Purchase Order.
6. Certificate from the Bidder's statutory auditors must be furnished in the format below for LOA/Work Order/Purchase Order mentioned above (separately for each orders).
7. It may be noted that in the absence above certificates, the details would be considered inadequate and could lead to the bid being considered ineligible for further evaluation.

Certificate from the Statutory Auditor regarding Supply of Good/Works/Services

Based on its books of accounts and other published information authenticated by it, (this is to certify that LOA/PO/WO No.....dated.....was awarded to.....(name of the Bidder) by(Name of Client) to execute.....(name of Supply/work/Service). The Supply/Works/Services commenced on..... (Date) and was/is likely to be completed on..... (Date, if any). It is certified that the total value of contract/order executed by.....(name of bidder) was(Specify Currency and amount) and executed value was.....(Specify Currency and amount).

Name of Audit Firm/:
Chartered Accountant
Date:

[Signature of Authorized Signatory]

Name:
Designation:
Seal:
Membership no.

FORMAT FOR STATUTORY AUDITOR'S/CHARTERED ACCOUNTANT* CERTIFICATE FOR FINANCIAL CAPABILITY OF THE BIDDER

(For Supply of Goods/Works/Services)

We have verified the Annual Accounts and other relevant records of M/s..... (Name of the bidder) and certify the following.

A. ANNUAL TURNOVER OF LAST 3 YEARS:

YEAR	AMOUNT (CURRENCY)
Year 1:	
Year 2:	
Year 3:	

B. FINANCIAL DATA FOR LAST AUDITED FINANCIAL YEAR:

DESCRIPTION	YEAR____ (AMOUNT - CURRENCY)
1. Current Assets	
2. Current Liabilities	
3. Working Capital (Current Assets-Current liabilities)	
4. Net Worth (Paid up share capital and Free Reserve & Surplus)	

Name of Audit Firm/
Chartered Accountant
Date:

[Signature of Authorized Signatory]

Name:
Designation:
Seal:
Membership no.

INSTRUCTIONS:

1. The financial year would be the same as one normally followed by the bidder for its Annual Report.
2. The bidder shall provide the audited annual financial statements as required for this Tender document. Failure to do so would result in the Proposal being considered as non-responsive.
3. For the purpose of this Tender document, (i) Annual Turnover shall be "Sale value/Operating Income" (ii) Working Capital shall be "Current Assets less Current liabilities" and (iii) Net Worth shall be "Paid up share capital and Free Reserves & Surplus."
4. * Bidder whose accounts are not audited by auditors as per law/jurisdiction, certification from a Chartered Accountant to be submitted.

INSTRUCTIONS TO BIDDERS

DESCRIPTION:

NAME OF WORK: EXTERNAL WATER SUPPLY AT BCPL AND CISF TOWNSHIP, OVERHEAD AND UNDER GROUND WATER TANK, PUMP HOUSE, SECURITY OFFICE AND TELECOM/IT EQUIPMENT ROOM AT BCPL TOWNSHIP AND SUBSTATION AT BCPL AND CISF TOWNSHIP FOR M/S BRAHMAPUTRA CRACKER & POLYMER LIMITED AT LEPETKATA, DIBRUGARH, (ASSAM)

(Tender no.) BCPL/DIB/C&P/SER/20120125/MD

1.0 BIDDING DOCUMENT, CLARIFICATION AND ADDENDUM

1.1 BIDDING DOCUMENT:

1.1.1 One set of bidding document (Tender document) are issued. Bidder shall submit the Tender document duly signed & stamped on each page of tender in token of his acceptance along with his bid.

1.1.2 Transfer of bidding document issued to one intending bidder to another is not permissible.

1.1.3 Bid shall remain valid for 120 days from the date of submission of Bid.

1.2 CLARIFICATION REQUESTS BY BIDDER:

1.2.1 Although the details presented in this Bidding document consisting of conditions of contract, scope of work, technical specifications and drawings have been compiled with all reasonable care, it is the Bidder's responsibility to ensure that the information provided is adequate and clearly understood.

1.2.2 Bidder shall examine the bidding documents thoroughly in all respect.

1.2.3 Any failure by Bidder to comply with the aforesaid requirement shall not excuse the Bidder, after subsequent award of contract, from performing the work in accordance with the agreement.

1.3 AMENDMENT OF BIDDING DOCUMENT:

1.3.1 BCPL may, for any reason whether at his own initiative or in response to the clarification requested by the prospective Bidder, issue amendment in the form of addendum during the Bidding period and subsequent to receiving the bids. Any addendum thus issued shall become part of Bidding document and Bidder shall submit 'original' addendum duly signed and stamped in token of his acceptance.

1.3.2 For addendum issued during the Bidding period, Bidder shall consider the impact in his Bid. For addendum issued subsequent to receiving the Bids, Bidder shall follow the instructions issued along with addendum with regard to submission of impact on quoted price / revised price, if any.

1.4 CONFIDENTIALITY OF DOCUMENT:

1.4.1 Bidder shall treat the Bidding document and contents thereof as confidential.

1.5 ACKNOWLEDGEMENT & CONFIRMATION OF BID:

1.5.1 Within 7 days of receipt of bidding document, Bidder shall acknowledge the receipt and confirm his intention to Bid for the Bidding work.

2. EARNEST MONEY DEPOSIT:

2.1 The bid must be accompanied by earnest money (interest free) for the amount indicated in 'Request for Quotation' in the form of a Demand Draft drawn on any Nationalized/Scheduled Bank in favour of M/s. Brahmaputra Cracker & Polymer Limited payable at STATE BANK OF INDIA, DIBRUGARH, ASSAM or in the form of Bank guarantee issued by Nationalized Bank for an equal amount valid for six (06) months from the due date of submission of bid as per the format enclosed in bidding document. Bid not accompanied by earnest money will not be considered unless the same is exempted as per 'Letter Inviting Tender'. Bank guarantee shall be revalidated for extended period as required by BCPL in writing.

- 2.2 If the bidder, after submission, revokes his bid or modifies the terms and conditions thereof during the validity of his bid except where the BCPL has given opportunity to do so, the earnest money submitted by Bidder will, in such case, not be refunded to him.
- 2.3 BCPL may at any time cancel or withdraw the invitation to bid without assigning any reason and the earnest money submitted by Bidder will in such case be refunded to him.
- 2.4 The successful Bidder shall be required to deposit within 10 days of acceptance of his bid, security deposit / Initial Security Deposit with the BCPL in the manner indicated in General Conditions of Contract / Special Conditions of Contract. Should the successful Bidder fail or refuse to sign the agreement or furnish the security deposit / initial security deposit within the period fixed by the BCPL as indicated above, the earnest money shall be forfeited without prejudice to his being liable to any further loss or damage incurred in consequence by the BCPL.
- 2.5 Earnest money shall be returned to the successful Bidder after the security deposit / initial security deposit has been furnished by him to the BCPL.

3.0 SCHEDULE OF RATES:

- 3.1 The schedule of Rates shall be read in conjunction with all other sections of bidding document.
- 3.2 The rates quoted by the bidder shall be firm and fixed for the completion period of the tendered works, unless stated otherwise. The rates quoted by the Bidder shall include all taxes, duties & levies except Service Tax and any cess thereon. Service Tax and cess thereon shall be paid by BCPL extra at actual against CENVAT invoice to be submitted by the bidder.
Notwithstanding the instructions given above, in case any bidder(s) mention the terms such as "Inclusive" or "Included" in respect of Service Tax, their bids will still be evaluated considering the prices exclusive of Service Tax. However, in the event of such bidder emerging as the lowest bidder based on this evaluation, the award shall be made considering the service tax included in the quoted rates and the same will be conclusive and binding on the bidder. Further, the bidder will be required to submit Cenvat invoice to enable BCPL to avail Cenvat benefit.
- 3.3 Rates must be filled in format for 'schedule of rates' enclosed as part of bidding document. If quoted in separate typed sheets and any variation in description, unit is noticed, the bid is liable to be rejected. In any case bidder shall be presumed to have quoted against the description of work and the same shall be binding on the bidder.
- 3.4 In case any activity though specifically not covered in description of 'Schedule of Rates' but is required to complete the work as per Scope of Work, Scope of Supply, Specifications, Standards, Drawings, General Conditions of Contract, Special condition of contract or any other part of bidding document, the quoted rates will deemed to be inclusive of cost incurred for such activity.
- 3.5 The rates shall include all expenditure incurred towards mobilization and demobilization.
- 3.6 Rates quoted shall be in Indian Rupees Only.
- 3.7 Bidder shall quote rates both in figures as well as in words.

4.0 DOCUMENTS COMPRISING THE BID:

- 4.1 Bidder is advised that BCPL intend to fully evaluate the technical and un-priced commercial submissions.
- 4.2 It is important that Bidder clearly demonstrates his experience and capability, giving to BCPL a high level of confidence that if awarded, the Bidder will be able to perform the works within the stipulated Time Schedule and quoted price and meeting all other requirements listed in the Bidding document.
- 4.3 Bidder is requested to furnish the complete and correct information required for evaluation of his Bid. If the information with regard to resources and concurrent commitments or any other information / documentation forming basis of evaluation is found in complete / incorrect the same may be considered adequate ground for rejection of the bid.
- 4.4 Bidder shall arrange his bid in the following order:

i) **PART-I TECHNICAL AND UN-PRICED COMMERCIAL PART (TECHNO-COMMERCIAL BID) :**

Technical and un-priced commercial part shall comprise the attachments, specifying attachment number arranged in the order as follows:

- a) Submission of bid letter along with Bidding document (Tender document), Earnest Money Deposit and its details.
- b) Attested copies of documents as mentioned in Request for Quotation
- c) Copy of tender document duly signed and stamped towards acceptance to terms and conditions of the tender.
- d) Power of Attorney in favour of authorized signatory of the Bidding document.
- e) Organization details
 - In case of a proprietorship firm, the name and address of proprietor, and certified copy of 'Certificate of registration of firm'.
 - In case Bidder is a partnership firm, certified copy of the partnership deed.
 - In case of company (whether private or public), certified copy of the 'Certificate of Incorporation' together with certified Memorandum / articles of Association.
- f) Copy of "Schedule of Rates" without any prices (which will be left blank) duly signed and stamped.
- g) Technical offer if any, required as per Bidding document.
- h) Check list (Exhibit-A)
- i) Any other relevant document, Bidder desires to submit.

ii) **PART-II PRICED COMMERCIAL PART (PRICE BID):**

- a) Priced commercial Part shall contain "Schedule of Rates" duly filled in .Two copies i.e. one ORIGINAL COPY and one DUPLICATE copy of "Schedule of Rates" shall be submitted.
- b) No stipulation, deviation, terms & conditions, presumption, basis etc. shall be stipulated in Price part of bid. BCPL shall not take cognizance of any such statement and may at their discretion reject such price bids.

5.0 SUBMISSION OF BID:

5.1 SUBMISSION IN TWO SEPARATE ENVELOPS:

5.1.1 Un-priced and priced part must be submitted in separate sealed envelopes in following 2 parts:

i) **PART-I – TECHNICAL AND UN-PRICED COMMERCIAL PART**

- a) This part shall contain technical and commercial (Un-priced) bid. This envelope shall comprise the signed copy of Bidding document (Tender document), drawings, addendum (if any), one original and 1 copy of the information listed for submission in Part –I under Para 4.4. above. Techno-commercial bid containing prices shall be summarily rejected.
- b) The envelope shall have following information clearly written on the outside of the envelope, failing which BCPL will assume no responsibility for the misplacement or premature opening of the bid.

Part-I Technical and Un-priced Commercial Part.

Name of Work: _____

Bidding document No.: _____

Due date & time of Opening: _____

From : [Name & Address of Bidder]: _____

- c) Original earnest money deposit (EMD shall also be enclosed in this part.

ii) **PART-II SEALED PRICED COMMERCIAL PART:**

- a) This part of the bid shall contain the Schedule of Rates, duly filled in all respects and other information specifically requested for submission in price part under Para 4.4 ii) above. The envelope shall have the following information clearly written on outside of the envelope, failing which BCPL will assume no responsibility for the misplacement or premature opening of the bid.

PART-II – PRICE PART

Name of Work : _____

Bidding document No. : _____

From : [Name & Address of Bidder] : _____

- b) This part of Bid will be submitted in original plus one copy.

5.2 **DATE, TIME & PLACE OF SUBMISSION:**

- 5.2.1 Bid must be submitted by the due date and time mentioned in the Letter Inviting Tender or any extension thereof as duly notified in writing by BCPL at the following address:

SR. MANAGER (C&P), CENTRAL WARE HOUSE, BCPL PROJECT SITE, LEPETKATA-786006, DIBRUGARH, ASSAM INDIA.

- 5.2.2 Bid received after the time and date fixed for receipt of bid is liable for rejection.

5.3 **CHECK LIST FOR SUBMISSION OF BID:**

- 5.3.1 To assist bidder in ensuring the completeness of bid, a checklist for submission of various documents / details in 'technical & un-priced commercial part of bid has been enclosed to "INSTRUCTIONS TO BIDDERS". Bidder, in his own interest, is requested to fill the checklist and submit along with his bid for ready reference.

- 5.3.2 In case of incomplete submissions, BCPL will not be under any obligation to give the bidder an opportunity to make good such deficiencies and BCPL may at its discretion treat such bids as incomplete and not consider for further evaluation.

6.0 **BID OPENING AND EVALUATION:**

6.1 **OPENING OF TECHNO-COMMERCIAL PART OF BID**

- 6.1.1 On the date and time mentioned in 'Letter Inviting Tender' (if specified), Part-I i.e. Technical and un-priced commercial Part will be opened in the office of BCPL, CENTRAL WARE HOUSE, BCPL Project Site, Lepetkata-786007, Dibrugarh, Assam.

- 6.1.2 In the event, the specified date of bid opening is declared a holiday for BCPL, the bid shall be opened on the next working day at the specified time and location.

6.2 **CLARIFICATION & ADDITIONAL INFORMATION:**

During evaluation, BCPL may request Bidder for any clarification on the bid, additional or outstanding documents. Bidder shall submit all additional documents in one original and one copy. However, seeking clarification shall be on sole discretion of BCPL.

6.2 **TECHNO-COMMERCIAL DISCUSSIONS:**

- 6.3.1 Bid of the bidder who submits the required EMD shall be taken up for detailed evaluation.

- 6.3.2 Techno-commercial discussions with bidder shall be arranged, if needed. Bidder shall depute his authorized representative(s) for attending the discussion. The representative(s) attending the discussions shall produce authorization from his organization to attend the discussions and sign the minutes of meeting on behalf of his organization. The authorized representatives must be competent and empowered to settle all technical and commercial issues.

6.4 **BID EVALUATION CRITERIA:**

- 6.4.1 Bid is the responsibility of bidder and no relief or consideration can be given for errors and omissions made by the bidder inadvertently or adherently. Bid with incomplete information is liable for rejection.

6.4.2 The techno-commercial part of bid shall be evaluated as per bid evaluation criteria, wherever indicated in the bidding document.

6.4.3 Non-submission of details / documents as per Para (4.4.) above may lead to rejection of bid.

6.4.4 **REJECTION CRITERIA:**

I) **Bidders are advised to strictly confirm compliance to tender condition and not to stipulate any deviation / condition in their offer. Bids received with deviation to tender condition especially to the following clauses shall be considered non-responsive and shall be summarily rejected:**

- I. Firm Price
- II. EMD / Bid Bond
- III. Scope of Work
- IV. Specification
- V. Price Schedule / Schedule of rates
- VI. Delivery / Completion Schedule
- VII. Period of Validity of Bid
- VIII. Price Reduction Schedule
- IX. Performance Bank Guarantee / Security Deposit
- X. Guarantee
- XI. Arbitration / Resolution of Dispute
- XII. Force Majure
- XIII. Applicable Laws
- XIV. EPF Registration in case of Domestic bidder
- XV. Clauses no.6.4.2 and 6.6 of instruction to bidders.
- XVI. Any other condition / clauses mentioned in the tender documents.
- XVII. Penalty/Compensation for delay
- XVIII. Defect Liability period
- XIX. Termination
- XX. Time schedule

6.4.6 **GUIDELINES FOR SCRUTINY/COMPARISON OF BIDS:-**

The discrepancies in rate filled for various items shall be resolved in the following manner:-

- (i) When there is a difference between the rates in figures and words, the rate which corresponds to the amount worked out by the contractor (by multiplying the quantity and rate) shall be taken as correct.
- (ii) When the rate quoted by the contractor in figures and words tallies but the amount is incorrect, the rate quoted by the contractor shall be taken as correct and not the amount and the amount corrected.
- (iii) When it is not possible to ascertain the correct rate, in the manner prescribed above, the rate as quoted in words shall be adopted and the amount worked out, for comparison purposes.
- (iv) In case it is observed that any bidder has not quoted for any item in the Schedule of Rates (Such unquoted item not being in large numbers), the quoted price for the purpose of evaluation shall be considered as the maximum rate quoted by the remaining bidder for such items.

If after evaluation, such bidder is found to be the lowest evaluated bidder, the rates for the missing item shall be considered as included in quoted bid price.

If the estimated price impact of the unquoted items is more than 10% of the bidder's quoted price, the above provision shall not be applicable and such bid shall be rejected.

ABNORMALLY HIGH RATED ITEMS (AHR ITEMS):

In items rate contract where the quoted rates for the items exceed 50% of the estimate rates, such items will be considered as Abnormally High Rates Items (AHR) and payment of AHR items beyond the SOR stipulated quantities shall be made at the lowest amongst the following rates:

- (I) Rates as per SOR, quoted by the contractor.
- (II) Rate of the item, which shall be derived as follows:
 - a) Based on rates of machine and labor as available from the contract (which includes contractor's supervision, profit, overheads and other expenses).
 - b) In case rates are not available in the contract, rates will be calculated based on prevailing market rates of machine, material and labor plus 10% to cover contractor's supervision profit, overhead & other expenses.

DETERMINATION OF RESPONSIVENESS:

- i) Prior to the financial evaluation of bids, the BCPL will determine whether each bid is substantially responsive to the requirements of the Bidding document.
- ii) For the purpose of this clause, a substantially responsive bid is one, which conforms to all the terms and conditions and specifications of the bidding document without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality, or performance of the works or which limits in any substantial way, in consistent with the bidding document, the employer's rights of contractor's obligation would affect unfairly the competitive position of bidders presenting substantially responsive bids.
- iii) If a bid is not substantially responsive to the requirements of the Bidding documents, it may be rejected by the BCPL.

6.4.7 Bidders must submit the bid in line with bid stipulations without taking any deviation. However, in case it becomes unavoidable and the Bidder seeks some clarifications / queries with respect to technical / commercial part, the bidder may stipulate the same strictly as per Annexure-I for the technical and commercial part.

6.4.8 UNSOLICITED POST BIDDING MODIFICATIONS:

Bidders are advised to quote strictly as per terms and conditions of the bidding document and not to stipulate any deviations / exceptions. Once quoted, the bidder shall not make any subsequent changes, whether resulting or arising out of any technical / commercial clarifications sought on any deviations or exceptions mentioned in the bid. Any proposal price change is likely to render the bid liable for rejection.

6.4.9 Bidders must ensure that complete bid along with all details as sought are submitted as per provisions of the bidding document. The checklist has been provided in the bidding document to ensure that any required details are not missed by the bidders while submitting their offer.

6.4.10 Proposed deployment of resources like manpower, equipment, tools and tackles shall be looked into to ensure performance of work within stipulated time period.

6.4.11 The concurrent commitments of Bidder on various jobs under execution by the bidder will be taken into account to assess the spare capacity available with the Bidder.

6.4.12 Performance of bidder on work executed / under execution shall be taken into consideration before selecting the bidder for opening of his price bid.

6.4.13 MECHANIZED CONSTRUCTION:

- i) Bidder shall furnish construction methodology based on mechanized construction techniques for execution of work along with details of plant & machinery to be deployed. The bidder shall assess the number and type of plant and machinery for the scope of work and the completion schedule.
- ii) Bidder will deploy the required numbers and types of plant & machinery applicable for different activities in consultation with the Engineer-In-Charge after award and during execution of work with respect to actual mobilization required.

6.5 OPENING OF PRICE PART OF BID:

Priced commercial part of only those bidder, whose bids are considered techno-commercial acceptable, shall be opened.

6.6 EVALUATION OF PRICE PART:

The "Schedule of Rates" quoted by the bidder shall be taken up for evaluation on overall basis . Price bids containing additional qualifications not mentioned in Techno-Commercial part of the bid shall be summarily rejected.

6.7 PROCESS TO BE CONFIDENTIAL:

Information related to the examination, clarification, evaluation and comparison of bids recommendations for award of contract shall not be disclosed to bidder or other person not officially concerned with such process. Any effort by bidder to influence the BCPL processing of bid or award decisions may result in rejection of such Bids and the owner may initiate action against such bidders, as deemed fit, including putting them on "HOLIDAY LIST".

6.8 OWNER'S RIGHT TO ACCEPT OR REJECT A BID:

6.8.1 BCPL reserves the right to accept a bid other than the lowest and to accept or reject any bid in whole or part, to annual the bidding process or to reject all bids with or without notice or reasons. Such decisions by BCPL shall bear no liability whatsoever consequent upon such decisions.

6.9 AWARD OF WORK AND CONTRACT DOCUMENT:

6.9.1 AWARD OF WORK:

The bidder whose bid is accepted by BCPL shall be issued Letter of Intent / fax of Intent (LOI/FOI) prior to expiry of bid validity. Bidder shall confirm acceptance by returning a signed copy of the LOI / FOI.

6.9.2 BCPL shall not be obliged to furnish any information / clarification / explanation to the unsuccessful bidders as regards non acceptance of their bids. Except for refund of EMD to unsuccessful bidder, BCPL shall correspond only with the successful bidders.

7.0 CONTRACT DOCUMENT:

7.1 The successful bidder shall be required to execute a formal agreement in accordance with the 'Form of Contract' (Annexed to General Condition of Contract (GCC)), within 10 days of receipt of LOI/FOI/Detailed Letter of Award specified period.

7.1.1 Contract Documents to be signed between BCPL & selected bidder shall consist of the following:

- i) Agreement on stamp paper of appropriate value.**
- ii) Letter of Intent / Fax of Intent**
- iii) Detailed letter of award / acceptance along with agreed variation and other enclosures.**
- iv) Original bidding document along with set of drawings**
- v) Addendum/Corrigendum issued to bidder, if any.**

7.2 Stamp paper of appropriate value shall be provided by the successful bidder after ascertaining its value.

7.2.1 The statement of Agreed variation prepared based on the deviation if any, finally retained by the bidder and accepted by BCPL, shall form part of detailed letter of award.

SPECIAL CONDITIONS OF THE CONTRACT

PART-A

DESCRIPTION:

NAME OF WORK: EXTERNAL WATER SUPPLY AT BCPL AND CISF TOWNSHIP, OVERHEAD AND UNDER GROUND WATER TANK, PUMP HOUSE, SECURITY OFFICE AND TELECOM/IT EQUIPMENT ROOM AT BCPL TOWNSHIP AND SUBSTATION AT BCPL AND CISF TOWNSHIP FOR M/S BRAHMAPUTRA CRACKER & POLYMER LIMITED AT LEPETKATA, DIBRUGARH, (ASSAM)

TENDER NO: BCPL/DIB/C&P/SER/20120125/MD

1.0 GENERAL:

- 1.1 The Special Condition of Contract shall be read in conjunction with the General Conditions of Contract, Schedule of rates, specifications, drawings and any other documents forming part of contract, wherever the context so requires. Notwithstanding the sub-division of the documents into these separate sections and volumes, every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the CONTRACT so far as it may be practicable to do so.
- 1.2 Where any portion of the General Condition of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears, the provisions of the Special Conditions of Contract shall be deemed to over-ride the provisions of the General Conditions of Contract and shall to the extent of such repugnancy, or variations, prevail.
- 1.3 Wherever it is mentioned in the specifications that the CONTRACTOR shall perform certain WORK or provide certain facilities, it is understood that the CONTRACTOR shall do so at his cost and the VALUE OF CONTRACT shall be deemed to have included cost of such performance and provisions, so mentioned.
- 1.4 The materials, design, and workmanship shall satisfy the relevant INDIAN STANDARDS, the JOB SPECIFICATIONS contained herein and CODES referred to. Where the job specification stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.
- 1.5 The intending bidder shall be deemed to have visited the site. Non-familiarity with site condition and unawareness of General Condition of contract will not be considered a reason either for extra claim or for not carrying out work in strict conformity with drawings and specifications.

2.0 LOCATION:

BCPL, Lepetkata, Dibrugarh, Assam

3.0 SCOPE OF WORK:

The Scope of work shall be as per Special Conditions of Contract Part-B.

4.0 TIME OF COMPLETION/PERIOD OF CONTRACT:

The Time of Completion/Period of Contract shall be as per Special Conditions of Contract Part-B. The work shall be executed strictly as per time Schedule given in Tender Document. The period of completion given includes the time required for mobilization as well as testing, rectifications, if any, re-testing and completion in all respects to the entire satisfaction of the Engineer-in-Charge.

5.0 TERMS OF PAYMENT:

Payment will normally be made within 30 days of submission of bills to Engineer-in-charge after applicable deduction of Income Tax and any other taxes and duties.

Other terms and conditions related to Payment terms are specified in SCC Part B.

6.0 EARNEST MONEY:

The bidder must deposit the earnest money as given in the letter/notice inviting tenders failing which the tender is liable to be rejected. Earnest Money can be paid by way of Demand Draft drawn on any Scheduled/Nationalized Bank in favor of **M/s. Brahmaputra Crackers & Polymers Limited payable at STATE BANK OF INDIA, DIBRUGARH, ASSAM.**

Alternatively, Earnest Money may also be submitted in the form of Bank Guarantee from any Nationalized/Schedule Bank of India. The Bank Guarantee so furnished by the bidder shall be in the proforma prescribed by the OWNER attached with the Tender document. No interest shall be paid by the OWNER on the Earnest Money deposited by the bidder. The Bank Guarantee furnished in lieu of Earnest Money shall be kept valid for a period of **(6) SIX MONTHS** from the date of opening of tender.

BCPL will refund the Earnest Money of the unsuccessful bidders directly to the bidders within a reasonable period of time. Correspondence in this regard may be addressed to BCPL directly by the BIDDERS.

7.0 INCOME TAX/ SALES TAX/WORKS CONTRACT TAX:

Income Tax deduction shall be made from all payments to the contractors as per rules and regulation in force in accordance with the Income Tax Act prevailing from time to time. Sales Tax, Works Contract Tax and other duties/ levies, as applicable shall be borne by the contractor.

The BCPL will issue the necessary certificate for income tax deduction at source, however, the contractor has to submit detail of their **Permanent Account No. (PAN)** before issue of such certificate. However, if the contractor has not been allotted PAN and has applied for the same to Income Tax department / the authorized agency nominated by Income Tax department, contractor shall submit the copy of application filed for allotment of PAN No. In absence of any of these documents, no TDS certificate shall be issued by BCPL.

Similarly, in case of Works Contract (involving both supply of material and services) Tax will be deducted at source by BCPL towards W.C.Tax at the rate applicable from time to time (presently 4%) and issue necessary certificate to this effect.

8.0 SERVICE TAX:

The Quoted rates should be inclusive of all taxes & duties applicable during the contract period except Service Tax and Education Cess thereon. Service Tax and Cess thereon shall be paid extra if applicable on submission of documentary evidence/invoice(s).

The bidder shall indicate in its bid the Service Tax registration no. and in case the Service Tax registration no. is not available, the bidder will give confirmation for obtaining registration with a copy of application for registration.

The Contractors liable to pay Service Tax for the work / services rendered to BCPL, shall specifically mention the Service Tax registration No. in their Invoice(s). Further, the amount and rate of Service Tax shall be separately and distinctly specified in the Invoice(s).

For payment of service tax, serially numbered invoice / bill shall be issued by the service provider and should also specify following as per rule 4A of service tax Rules:

- (i) The name, address and registration number of the service provider
- (ii) The name and address of the recipient of the taxable service
- (iii) Description, classification and value of taxable service provided and
- (iv) The service tax payable on such services

The above details are required to enable BCPL to avail Cenvat credit for the service tax payments. Further service tax to be raised as per the new rules of service tax w.e.f. 01.07.2012.

9.0 SECURITY DEPOSIT:

- 9.1 Security deposit @ 10% of contract value has to be deposited within ten days of receipt of LOA/LOI by the contractor. EMD deposited with the tender shall be adjusted towards security deposit/ISD provided it is deposited by Demand Draft/Bankers Cheque.
- 9.2 No interest shall be payable by the Company to the contractor for the amount of Security deposit.
- 9.3 Contractor can furnish the initial or total security deposit amount through bank guarantee from any nationalized /Schedule bank in prescribed proforma which shall be valid for 90 days beyond completion of the job or expiry of Defect Liability Period whichever is applicable.
- 9.4.1 Security Deposit shall be refunded within 90 days after the completion of work or Defect Liability Period whichever is applicable.

10.0 TECHNICAL SPECIFICATION:

As enumerated in Special Conditions of Contract/Scope of Work/attached Drawing/ Details/Schedule of Rates.

11.0 TESTS AND INSPECTION:

- 11.1 The Contractor shall carry out the various tests as enumerated in the technical specifications of this tender document and the technical documents that will be furnished to him during the performance of the work and no separate payment shall be made unless otherwise specified in schedule of rates.
- 11.2 All the tests either on the field or at outside laboratories concerning the execution of the work and supply of materials by the Contractor shall be carried out by Contractor at his own cost.
- 11.3 The Contractor shall provide for purposes of inspection access ladders, lighting and necessary instruments at his own cost for inspection work.
- 11.4 Any work not conforming to execution drawings, specifications or codes shall be rejected forthwith and the Contractor shall carryout the necessary rectification at his own cost.
- 11.5 All results of inspection and tests will be recorded in the inspection reports, Proforma of which will be approved by the Engineer-in-Charge. These reports shall form part of the completion documents.
- 11.6 For materials supplied by Owner, Contractor shall carryout the tests, if required by the Engineer-in-Charge, and the cost of such tests shall be reimbursed by the owner at actual to the Contractor on production of documentary evidence. Contractor shall inspect carefully all equipment before receiving them from Owner for installation purposes. Any damage or defect noticed shall be brought to the notice of Engineer-in-Charge.
- 11.7 Inspection and acceptance of work shall not relieve the Contractor from any of his responsibilities under this Contract.

11.0 MEASUREMENT OF WORK:

- 12.1 Measurement of works shall be made in the units mentioned in the Schedule of Rates as per details given in Technical/Standards specifications.
- 12.2 Wherever details are not available or inadequate in the execution drawings, physical measurements will be taken by the contractor in the presence of the representative of the Engineer-in-Charge. In such cases payment will be made on actual measurements.

12.0 DEFECT LIABILITY PERIOD:

The defect liability period shall be as per Special Conditions of Contract of Part-B.

14.0 CONSTRUCTION EQUIPMENT AND SITE ORANOGRAM:

- 14.1 The Contractor shall without prejudice to his overall responsibility to execute and complete the work as per specifications and time schedule, progressively deploy adequate equipment and tools and

tackles and augment the same as decided by the Engineer-in-Charge depending on the exigencies of the work so as to suit the work/construction schedule without any additional cost to owner. The bidder shall submit a list of construction equipment he proposes to deploy for the subject work along with deployment schedule. No Construction Equipment shall be supplied by the Owner.

14.2 Subject to the provisions in the tender document, contractor shall deploy experienced technical personnel as under:

- 1) 1 (One) no. Project Engineer having adequate knowledge and experience.
- 2) 2 (Two) nos. Site Engineers (Civil)
- 3) 1 (No.) Electrical Engineer

In case of non deployment, a penalty may be imposed as per discretion of the Engineer-in-Charge subject to a maximum of Rs. 200000/-. The bidder shall submit the details of site organogram.

13.0 MOBILIZATION ADVANCE (M.A.):

No mobilization advance is payable for this work.

14.0 COMPENSATION FOR EXTENDED STAY:

No compensation for extended stay is payable to contractor.

15.0 ABNORMALLY HIGH RATED ITEMS (AHR ITEMS):

In items rate contract where the quoted rates for the items exceed 50% of the estimate rates, such items will be considered as Abnormally High Rates Items (AHR) and payment of AHR items beyond the SOR stipulated quantities shall be made at the lowest amongst the following rates:

- (I) Rates as per SOR, quoted by the contractor.
- (II) Rate of the item, which shall be derived as follows:
 - c) Based on rates of machine and labor as available from the contract (which includes contractor's supervision, profit, overheads and other expenses).
 - d) In case rates are not available in the contract, rates will be calculated based on prevailing market rates of machine, material and labor plus 10% to cover contractor's supervision profit, overhead & other expenses.

16.0 MISCELLANEOUS:

All obligations arising of labor deployment labor laws to meet the necessary statutory requirement would solely lie on the contractor. Contractor would be solely responsible for safety and security of manpower and materials.

17.0 SUBMISSION OF TENDER DOCUMENTS:

Over-writing should be avoided. Any overwriting or cutting should be signed by the bidder. All copies of tender documents along with drawings should be signed and submitted by the bidder.

18.0 SCHEDULE OF RATES:

20.1 The quantities indicated in Schedule of Rates are just tentative. The rates quoted by the bidder shall remain firm for any variation and will assume to be inclusive of all taxes & duties excluding Service Tax & Cess thereon.

20.2 No escalation of whatsoever nature shall be paid to the contractor for the entire Contract Period.

19.0 COMPENSATION FOR DELAY:

21.1 In case of delay in mobilization or in completion of work in all respects and to the full satisfaction of Engineer-In-Charge, the Engineer-In-Charge may at his discretion impose a penalty at the rate of 0.5% per week or part thereof limited to 5% of the contract value.

21.2 Alternatively, in case the Engineer-In-Charge feels that the progress of work is dissatisfactory and the work may be delayed beyond the scheduled or contractual completion date, he may at his discretion get the work done through other agency at the risk and cost of the contractor without prejudice to

other rights available to owner under the contract. The decision of the Engineer-In-Charge shall be final and binding in this regard.

20.0 TERMINATION OF CONTRACT:

The Owner/ Engineer-in-Charge reserve the right to terminate the contract on giving one-week notice without assigning any reason.

21.0 CONTRACT AGREEMENT:

If the work is awarded the contractor shall enter into an agreement with BCPL in the prescribed Performa within 10 days of the issue of LOA/LOI whichever is earlier. The agreement shall be executed on non-judicial stamp paper of ₹. 100/- .The cost of stamp paper shall be borne by the contractor. The format of agreement can be obtained from the office of the Sr. Manager (C&P), BCPL, DIBRUGARH, ASSAM.

22.0 SUPERVISION OF WORK:

Contractor or his authorized representative shall be available at site all times, during the progress of the work.

23.0 CLEARANCE OF SITE:

25.1 As a part of the contract the contractor shall completely remove all temporary/disposable materials, while execution of work at his own cost and initiative and dispose off the same as directed by Engineer-in-charge.

25.2 The works will not be considered as complete and taken over by the owner, until all the temporary works, labor and staff colonies etc. constructed are removed and the work site cleared to the satisfaction of the Engineer-in-charge, surplus materials and rubbish is cleared off the site completely and the work shall have been measured by the Engineer-in-charge whose measurement shall be binding and conclusive.

25.3 If the contractor fails to comply with the requirements of this clause on or before the date fixed for the completion of the work, the Engineer-in-charge may at the expenses of the contractor remove such, surplus materials and rubbish and disposal off the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall forthwith pay the amount of all expenses as incurred and shall have no claim in respect of any such surplus materials as aforesaid except for any sum actually realized by the sale thereof.

24.0 ADHERENCE TO SAFETY REGULATIONS:

Contractor shall ensure that all safety precautions required one observed at all times during the execution of the job.

25.0 NUISANCE:

The contractor or his representative shall not at any time cause any nuisance on the site or do anything which shall cause unnecessary disturbance to the owners or tenants or occupants or their properties near the site and to the public generally.

26.0 OWNER NOT BOUND BY PERSONAL REPRESENTATION:

The contractor shall not be entitled to any increases on the schedule of rates or any other right or claim whatsoever by reason of any representation, explanation statement or alleged representation explanation statement or alleged representation, promise or guarantees given or called to have been given to him by any person.

27.0 CARE OF WORKS:

From the commencement to completion of the work, the contractor shall take full responsibility for the care for all works including all temporary works any in case any damages, loss or injury shall happen to the work or to a part thereof or to any temporary works from any reason.

28.0 DEFENCE OF SUITS:

If any action in court is brought against the owner or an officer or agent of the owner, for the failure, omission or neglect on the part of the contractor to perform any acts, matters, convenient or things under the contract or damage or injury caused by the alleged omission or negligence on the part of the contractor, his agents, representative or his subcontractors or in connection with any claim based on lawful demand of sub-contractor, shall in such cases indemnify and keep the owner and/or their representatives harmless from all lesson, damages, expenses or decrease arising out of such action.

31.0 RESPONSIBILITIES OF THE CONTRACTOR AND COMPLIANCE WITH LABOUR/INDUSTRIAL LAWS:

- 31.1 The contractor shall have his own PF code no. with the RPFC as required under employee PF & Miscellaneous Provisions Act, 1952.
- 31.2 The contractors shall periodically submit the challans / receipts / proof for the depositing PF contribution with RPFC.
- 31.3 The contractor is required to obtain labor license under the provisions of Contract Labor (R&A) Act, 1970 from the office of ALC, Ministry of Labor, Govt. of India, Dibrugarh.
- 31.4 The contractor is liable to abide by all necessary licenses / permissions from the concerned authorities as provided under the various labor legislations.
- 31.4.1 The contractor shall discharge obligations as provided under various statutory enactments including the employee's provident fund and Miscellaneous Provisions Act, 1952, Contract Labor (R&A) Act, 1970, Minimum Wages Act, 1948, Payment of wages act 1936, workman compensation act and other relevant acts, rules and regulations enforced from time to time.
- 31.5 The contractor shall be solely responsible for the payment of wages and other dues to the personnel, if any, deployed by him latest by 7th day of the subsequent month.
- 31.7 The contractor shall be solely responsible and indemnify the BCPL against all charges, dues, claim etc. arising out of the disputes relating to the dues and employment of personnel, if any, deployed by him.
- 31.8 The contractor shall indemnify BCPL against all losses or damages, if any, caused to it on account of acts of the personnel, if any, deployed by him.
- 31.9 All personnel deployed by the contractor should be on the rolls of the contractor.
- 31.10 The contractor shall ensure regular and effective supervision and controls of the personnel, if any, deployed by him and give suitable direction for undertaking the contractual obligations.
- 31.11 The personnel to be deputed by the contractor shall observe all security, fire and safety rules of BCPL while at the site. His work will be supervised by the supervisors of contractor. Contractor has to be strictly adhere to guidance, instruction when required.
- 31.12 Contractor shall provide proper identification cards for his employees to be deputed by him for work, duly signed by the contractor or authorized person on behalf of contractor. Also the contractor should obtain entry passes from CISF through engineer-in-charge for his employees.
- 31.13 Contractor has to deploy the personnel with no past criminal records. Reformed people, names of such persons should be clearly indicated in case of. Also the contractor has to provide police verification for all the persons deployed by him.
- 31.14 While confirming to any of these conditions, the contractor should ensure that no law of state regarding labor, their welfare, conduct etc, is violated. The contractor shall indemnify BCPL for any action brought against him for violation, non-compliance of any act, rules & regulation of center / state / local statutory authorities.
- 31.15 All existing and amended safety / fire rules of BPC, BCPL are to be followed within the BPC plant or service center.

- 31.16 Contractor shall ensure payment of wages to the person employed and meet all statutory obligation of payment as per Minimum Wages act 1948 and payment of wages Act 1936.
- 31.17 Boarding and lodging facilities for contractor's personal for carrying out the work is to be made by the contractor at his own cost outside the plant premises.
- 31.18 Special safety equipment e.g. breathing apparatus etc. shall be arranged by the Contractor.
- 31.19 The contracts will be required to provide full body harness safety belt for all their workers working at site positively.
- 31.20 The contractor should submit a valid health check-up certificate of their workers/labourers to BCPL before starting the job from a recognized Government Hospital towards the sound health for carrying out the job/work at site by each individual deployed.
- 31.21 Before undertaking jobs, contractor shall take work permit from Engineer-in-charge and same shall be returned after completion of job.
- 31.22 All types of transport connected with the work shall be in the scope of the contractor.
- 31.23 Suitable site office space may be provided by BPC, BCPL if required and available.
- 31.24 BCPL will provide free water, steam, air and electricity at suitable points, if required, for under taking the job.
- 31.25 All personnel undertaking the job proposed to be deployed by the contractor shall be medically examined and declared fit by qualified medical practitioner. It should be insured that no personnel engaged by the contractor is suffering from communicable disease.
- 31.26 Technicians/ supervisors deployed by the contractor should be technically qualified for fulfilling the contractual obligation.
- 31.27 In case of account, injury and death caused to the employee of the contractor while executing the work under the contract, the contractor shall be solely responsible for payment of adequate compensation, insurance money etc. to the next kith & kin of injured / diseased. Contractor shall indemnify BCPL from such liabilities.
- 31.28 The contractor shall also undertake to obtain necessary insurance coverage covering all risks connected with the job to be undertaken by him under the contract from insurance company and pay the premium accordingly.

32.0 PHOTOGRAPHS/LABOUR PERMISSION/VEHICLE PERMISSION :

The contractor shall arrange to make photo gate passes/labor permissions/vehicle passes etc. for his persons/labors/vehicles for working in site plant premises at his own cost as rules of the company.

33.0 ARBITRATION CLAUSE:

- 33.1 All disputes or differences, whatsoever, arising between the parties hereto pertaining to any part of the contract including its execution or concerning the WORKS or maintenance thereof this CONTRACT or to the rights or to liabilities of the parties or arising out or in relation thereto whether during or after completion of the CONTRACT or whether before or after determination, foreclosure or breach of the CONTRACT (other than those in respect of which the decision of any person is by the CONTRACT expressed to be final and binding) shall after written notice by either party to the CONTRACT be referred for adjudication to a sole arbitrator to be appointed by BCPL as hereinafter provided.
- 33.2 For the purpose of appointing the Sole Arbitrator referred to above, the Appointing Authority will send within thirty days of receipt of the notice, to the CONTRACTOR a panel of three names which are not connected with the work in question.
- 33.3 The CONTRACTOR shall on receipt of the names as aforesaid, select any one of the persons named to be appointed as a sole Arbitrator and communicate his names to the Appointing Authority within thirty days of receipt of names. The Appointing Authority shall thereupon without any delay appoint

the said person as the sole arbitrator. If the CONTRACTOR fails to communicate his choice for appointment of an Arbitrator, the Appointing Authority shall do it on expiry of 30 days.

- 33.4 If the Arbitrator so appointed is unable to or unwilling to act or resigns or vacates his office due to any reason whatsoever, another sole Arbitrator shall be appointed as aforesaid.
- 33.5 The WORK under the CONTRACT shall however, continue during the Arbitration proceedings and no payment due or payable to the CONTRACTOR shall be withheld on account of such proceedings.
- 33.6 The venue of arbitration shall be Guwahati.
- 33.7 The award of the Arbitrator shall be final and binding on both the parties.
- 33.8 Subject to aforesaid the provisions of the Indian Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rules made there under, and for the time being in force, shall apply to the arbitration proceeding under this clause.

34.0 JURISDICTION:

The CONTRACT shall be governed by and constructed according to the laws in force in INDIA. The CONTRACTOR hereby submits to the jurisdiction of the Courts situated at GUWAHATI for the purpose of disputes, actions and proceedings arising out of the CONTRACT.

35.0 SUMMARY TERMINATION OF CONTRACT DUE TO SUBMISSION OF FALSE DOCUMENT:

- 36.1 Bidders are required to furnish the complete and correct information/documents required for evaluation of their bids. If the information/documents forming basis of evaluation is found to be false/forged, the same shall be considered adequate ground for rejection of the Bids and forfeiture of Earnest Money Deposit.
- 36.2 In case, the information/document furnished by the contractor forming basis of evaluation of his bid is found to be false/forged after the award of the contract, BCPL shall have full right to terminate the contract and get the remaining job executed at the risk & cost of such contractor without any prejudice to other rights available to BCPL under the contract such as forfeiture of Security Deposit, withholding of payments etc.
- 36.3 In case the issue of submission of false document comes to the notice after execution of the work, BCPL shall have full right to forfeit any amount due to the contractor along with forfeiture of Security Deposit furnished by the contractor.
- 36.4 Further, such contractor/bidder shall be blacklisted for future business with BCPL.

36.0 SUBMISSION OF ATTESTED COPIES OF CERTIFICATES/DOCUMENTARY EVIDENCES:

- 37.1 The bidders are required to submit the copy of PF certificates duly attested by Gazetted Officer/Officer of Public Sector Enterprises.
- 37.2 Further, the bidders are required to furnish the attested copy (ies) of Power of Attorney/Partnership Deed.
- 37.3 Bidders are required to furnish the attested copy (ies) of documentary evidence in support of meeting the Bidder's Eligibility Criteria.
- 37.4 Non-submission of the attested copies of the certificates/documents will render they bid non-responsive and liable for rejection.

38.1 SUB LETTING OF WORK:

No contractor shall sublet or assign any work in part or whole to any firm, individual, partnership firm, Pvt. Ltd., Company, Proprietorship firm etc without the prior written permission of BCPL. In case the contractor sublets or assigns the contract in part or whole without the prior written permission of BCPL and any claim referred by any firm / individual to BCPL stating that the main contractor has not paid his or their dues/ payments, in that circumstances, BCPL shall without assigning any reasons,

withhold from the payments of contractor, the amount equivalent to the claim amount of sub-contractor/ individual/ vendor (s) etc. The same shall be released to the contractor after contractor and labour/ supplier/ sub-contractor jointly submits a joint written settlement to BCPL.

38.2 AFFIDAVIT:

The bidder shall submit an affidavit duly notarized to the effect “that the document submitted by him are true and genuine and in case of any discrepancy noticed or observed at any stage the bidder shall be personally responsible not only for the damages or loss to BCPL, but also for criminal proceedings under the relevant laws”.

38.3 PF REGISTRATION:

Bidder must have their own Valid P.F. account / code no. from Regional PF commissioner and attested copy of the same are to be submitted along with the technical bid.

39.0 The deployed labour by the contractor shall be directly controlled / supervised / directed by the contractor himself or his representatives.

40.0 PENALTY AGAINST VIOLATION OF SAFETY, HEALTH AND ENVIRONMENT RELATED NORMS:-

40.1 Against Violation of applicable Safety, Health and Environment related norms, a penalty of ₹. 5,000.00 per occasion.

40.2 Violation as above resulting in:

40.3 Any physical injury, a penalty of 0.5% of the contract value (maximum of ₹. 2, 00,000.00) per injury in addition to ₹. 5,000.00 as in para 40.1.

40.4 Fatal accident, a penalty of 1% of the contract value (maximum of ₹. 10, 00,000.00) per fatality is addition to ₹. 5,000.00 as in para 40.1.

41.0 EVALUATION IN RESPECT OF EXCISE DUTY/SERVICE TAX/VAT (WHICHEVER IS APPLICABLE):

41.1 In case of Excise duty and service tax, bids shall be evaluated after considering the effect of cenvatable excise duty and service tax to avail cenvat credit.

41.2 If the item is entitled for availment of input tax credit on VAT under Assam Value Added Act 2003, the bid shall be evaluated after considering the effect of ITC on VAT .In case bidders quote as inclusive of VAT, same shall not be considered during evaluation of bid.

41.3 Bidders are requested to mention the above components clearly in the SOR so that evaluation can be done accordingly.

41.4 In case the applicable amount towards VAT/Excise Duty /Service Tax as mentioned by the bidder is considered for giving benefit during evaluation of bid as stated above, the bidder must ensure to submit their invoice as per their declared applicable taxes & duties. If the bidder does not pass on the benefit to that extent to BCPL, the differential amount shall be deducted from their bill.

BRAHMAPUTRA CRACKER & POLYMER LIMITED

LEPETKATA, DIBRUGARH, ASSAM

A: CONTRACTOR'S SAFETY RECORD IN LAST ASSIGNED JOB: -

- Total nos. of employees =
- Working hours / day =
- Nos. of days worked =
- Total man hours worked =
(total nos. of employees X
working hrs / day X no. of days
worked)
- No. of fatalities =
- No. of major injuries =
- No. of three days injuries =
- Nos. of minor injuries =
- Total nos. of occupational Diseases / illness =

B: SAFETY INFORMATION TO BE SUBMITTED BY CONTRACTOR:

Following information to be submitted at the end of the every month to the, office of In-charge (F&S) directly with copy to Engineer-In-Charge.

- A. - Total nos. of employees =
 - Working hrs / days =
 -Duration of contract (in days) =

B. STATUS OF SAFETY – GADGETS

- Nos. of helmets =
- Nos. of safety belt =
- Nos. of goggles =

Welding Goggles =

Grinding Goggles =

General Goggles =

- Nos. of hand gloves =
- No. of safety shoe / gum boot =
- Length of barricading tapes =
- Status of warning tags (like radiography, road blocking, no entry etc. use) =

C. INCIDENT STATUS

- Name of safety representative =
- Nos. of minor injuries =
- Nos. of three days injuries =
- Nos. of major injuries =
- Nos. of fatalities (if any) =

D. INSPECTION RECORD

- Gas cutting set & welding =
- Machine inspected on & by
- List of hand tools updated on =
- Hand tools inspected on & by =
- Ladders & lifting tools inspected =
- on & by

SIGNATURE OF SITE IN-CHARGE

Contractor's Signature_____

NO DEVIATION CERTIFICATE

**BRAHMAPUTRA CRACKER & POLYMER LIMITED
LEPETKATA, DIBRUGARH, ASSAM**

Dear Sir,

We understand that any deviation/exception in any form may result in rejection of bid. We, therefore, certify that we have not taken any exceptions/deviations anywhere in the bid and we agree that if any deviation/exception is mentioned or noticed, our bid may be rejected.

NAME : _____

BIDDER'S NAME : _____

COMPANY SEAL : _____

SPECIAL CONDITIONS OF CONTRACT (SCC)

PART-B

NAME OF WORK: EXTERNAL WATER SUPPLY AT BCPL AND CISF TOWNSHIP, OVERHEAD AND UNDER GROUND WATER TANK, PUMP HOUSE, SECURITY OFFICE AND TELECOM/IT EQUIPMENT ROOM AT BCPL TOWNSHIP AND SUBSTATION AT BCPL AND CISF TOWNSHIP FOR M/S BRAHMAPUTRA CRACKER & POLYMER LIMITED AT LEPETKATA, DIBRUGARH, (ASSAM)

TENDER NO: BCPL/DIB/C&P/SER/20120125/MD.

1. GENERAL:

1.0 The special conditions of contract shall be read in conjunction with general conditions of contract where the provisions of these special conditions are at variance with the provisions of the General Conditions of the contract; the provision of these special conditions shall take precedence.

1.1 ORDER OF PRECEDENCE:

In case of ambiguity in Schedule of Rates, General Conditions of Contract, Specifications, Drawings the following order of precedence will prevail –

- a) Telex/Telegram/Fax of intent, detailed letter of intent along with statement of agreed variations and its enclosures and any corrigendum/addendum.
- b) Architectural, Structural and Services drawings
- c) Price part (with brief specifications)
- d) Specifications/Special notes regarding specifications/drawings in conjunction with each other however in case of any variations of size/thickness/dimensions of members between drawings/specifications etc. then drawings shall prevail over specifications.
- e) Special/additional conditions of contract.
- f) General conditions of contract.

2. LOCATION AND SITE CONDITION:

2.1 The site of the proposed work is at BCPL & CISF T/S, Lepetkata (almost 12KMS from Dibrugarh Town – towards Guwahati) in the Dibrugarh district of Assam.

2.2 The contractor shall deem to have inspected the site and thoroughly acquainted him with the site condition before submitting their tender. Non-familiarity with site condition will not be considered a reason either for extra claims or for not carrying out works in strict conformity with drawings and specifications.

3. SCOPE OF WORK:

3.1 The work involves similar nature of civil & electrical work with elevated over head tank and external water supply distribution network FOR M/S BRAHMAPUTRA CRACKER & POLYMER LIMITED AT LEPETKATA, DIBRUGARH, ASSAM as per drawings/specifications.

3.2 The basic scheme and the key requirements are spelt out in different parts of Technical specifications and the set of drawings as annexed with the document for different civil, electrical overhead tank and external water supply distribution network works. The contractors in their own interests offers shall be quoted taking into consideration that job shall be done as per specifications/drawings and with best workmanship. Quoted rate shall also include the cost site clearance. are advised to make themselves aware of site conditions, actual job requirement.

3.3 Quoted rate shall be inclusive of all required labour, materials, tools and tackles, consumables etc. and item rate

4. SCOPE OF SUPPLY:

4.1 All materials and labours required for completion of the work are to be supplied by the contractor unless mentioned otherwise.

5. RIGHT OF EMPLOYER TO ACCEPT/REJECT ANY TENDER:

5.1 The right to accept the tender rests with the EMPLOYER. The EMPLOYER, however, does not bind himself to accept the lowest tender and reserves the authority to reject any or all tenders received without assigning any reason what so ever.

6. EMPLOYER'S OBLIGATIONS:

6.1 The owner's obligations are limited to the following:

- a) Handing over the site
- b) Supply of construction drawings
- c) Payment to the contractor for performance of the work under the contract as per terms and conditions specified therein.
- d) A piece of land for setting up temporary site office, godown etc.

7. CONSTRUCTION WATER AND POWER:

7.1 CONTRACTORS have to arrange for themselves construction water and power for the completion of the job.

8. INFORMATION REQUIRED:

8.1 The following details are also required to be submitted along with of offer (supporting documents/certificates shall be required to be submitted with their request letters for short listing purpose).

The tenders as submitted will consist of the following:

- a) Complete set of Tender Documents (Original) as issued/sold duly filled in and signed by the tenderer as prescribed in different clauses of the tender document.
- b) Earnest money in the manner specified in clause 6 of GCC hereof.
- c) Power of attorney or a true copy thereof duly attested by a Gazetted Officer in case an authorized representative has signed the tender, as required by clause 14 of GCC hereof.
- d) Information regarding tenderers in the pro-forma enclosed.
- e) Details of work of similar type and magnitude carried out by the Tenderer in the pro-forma provided in the tender document.
- f) Organization chart giving details of field management at site, the tenderer for using in this work.
- g) A detail of construction plant and equipments available with the tenderer proposes to have for this job.
- h) Solvency Certificate from Schedule Bank to prove the financial ability to carry out the work tendered for.
- i) Latest Balance Sheet and Profit & Loss Account duly audited.
- j) Details of present commitment as per pro-forma enclosed to tender.
- k) Data required regarding SUB-CONTRACTOR(s) / Supplier / Manufacturers and other technical information's the tender wish to furnish.
- l) Provident Fund Registration Certificate.
- m) List showing all enclosures to tender.

9. DEVIATION IN TENDER DOCUMENTS:

9.1 The tenderers are required to quote item wise rates and unit rates (as per SOR) inclusive of all royalties, taxes, duties and levies as applicable from time to time without any deviations to the terms and conditions in tender document. However, service tax (if applicable) shall be Extra at actual & same shall be applicable as reverse charge mechanism w.e.f 01/07/2012. However, no deviations on the clauses as mentioned at 6.4.4 under ITB shall be acceptable and any offer containing deviations/exceptions to those shall be rejected.

10. SCHEDULE OF RATES:

10.1 The Schedule of Rates shall be read in conjunction with Special Conditions of Contract, General Conditions of Contract, Technical Specifications, Drawings and any other Document forming a part of this CONTRACT.

All items of work in the schedule of rates shall be carried out as per the specifications; drawings and instructions of the ENGINEER-IN-CHARGE and the rates are inclusive of all materials, consumables, labour, supervision, tools and tackles as well as preparatory, incidental, intermediate/auxiliary/ancillary or enabling works.

The rates shall be offered on ITEM RATE basis after considering all the aspects necessary for job execution as per drawings /specifications.

Dewatering of surface as well as subsoil water, wherever required to carry out the works shall be carried out by the CONTRACTOR and slopes for effective drainage shall be provided within the quoted rates.

Surplus excavated earth, materials; muck etc. shall be disposed off by the CONTRACTOR at his own cost to the places as directed by the ENGINEER-IN-CHARGE. The site shall be cleaned of all surplus material after execution quoted rates shall be deemed to be inclusive of all these provisions.

Preparing approaches and working area for the movement and operation of CONTRACTORS men and materials, leveling the areas for assembly and erection shall be the responsibility of the contractor and the quoted rates shall be deemed to include all these.

11. REGISTRATION WITH PF AUTHORITIES:

Intending bidders must furnish the proof of having valid PF code and valid registration with regional provident fund authorities along with their tenders. Proof of challans/receipt with regional PF authorities shall be submitted from time to time for verification of ENGINEER-IN-CHARGE.

12. VAT REGISTRATION:

12.1 Tenderer must submit wherever necessary attested copy of registration certificate on prescribed pro-forma under the Assam VAT Act. Alternatively, tenderer must give an undertaking that they would comply with this requirement before award of work.

13. LABOUR LICENSE:

13.1 Contractor shall obtain an appropriate license from concerned authority under the contract labour (abolition and regulation) Act 1970 and furnish copy of the same to owner. Contractor shall also be responsible for its validity and for complying with provisions of all applicable Acts, rules & regulation in force at the site of work.

14. TESTS AND INSPECTION:

14.1 The CONTRACTOR shall carry out the various tests as enumerated in the technical requirements annexed with this document (LIST OF MANDATORY TEST) and no separate payment shall be made unless otherwise specified in schedule of rates.

14.2 All the tests either on the field or at outside laboratory are concerning the execution of the work and supplies of materials if any by the contractor shall be carried out by CONTRACTOR at his own cost.

15. COMPLETION CERTIFICATE:

15.1 Within one month of the completion of work(s)/Part(s) in all respect, the contractor shall be furnished with a certificate by the ENGINEER-IN-CHARGE of such completion, but no certificate shall be given nor shall the work be deemed to have been executed until all surplus materials and rubbish is cleared off the site completely nor until the work shall have been measured by the ENGINEER-IN-CHARGE whose measurement shall be binding and conclusive. The works will not be considered as complete and taken over by the owner, until all the temporary works, labour and store and colonies etc. constructed are removed and the work site cleared to the satisfaction of the ENGINEER-IN-CHARGE.

If the CONTRACTOR fails to comply with the requirements of this clause on or before the date fixed for the completion of the works, the ENGINEER-IN-CHARGE may at the expenses of the CONTRACTOR remove such, surplus materials and rubbish and disposal off the same as he thinks fit and clean off.

Such dirt as aforesaid, and the CONTRACTOR shall forthwith pay the amount of all expenses incurred and shall have no claim in respect of any such surplus materials as aforesaid except for any such actually realized by the sale thereof.

16. DEFECTS LIABILITY PERIOD:

16.1 The tenderer shall guarantee all the work (Including workmanship & materials, etc.) executed by him for a period of 12 months from the date of completion of work(s)/Part(s). If during this period any defect occur, the same shall be made good by the contractor at his own cost. Failure to comply with this requirement may result in the forfeiture of security deposit.

However, in case of critical items, if the guarantee period is beyond defect liability period, then guarantee shall applicable for that period also.

17. TIME SCHEDULE:

17.1 Total period of CONTRACT for this work will be for **8(Eight) Months** to be reckoned from 7TH day from the date of issue of LOI/FOI. Time is the essence of the CONTRACT and as such as every effort should be made to complete the work within prescribed time period for the execution of the work as contemplated under this CONTRACT. BCPL reserves the right to terminate the CONTRACT without assigning any reason during the currency of the CONTRACT PERIOD by giving 30 days notice to the CONTRACTOR.

18. ARCHITECTS / CONSULTANT:

18.1 The company has appointed M/s. Rajkhowas Aarchi, M.D. Road, Guwahati - 03 as their Architects and Consultants for the planning, design and construction supervision of the project. For any clarification on this tender the tenderer shall contact the Architects/Consultants.

19. ESCALATION:

19.1 No Escalation shall be paid for this contract. CONTRACTORS are required to quote firm price for the work.

20. PROVIDENT FUND ACT:

20.1 The CONTRACTOR, as a statutory obligation, should strictly comply with the provisions of the Employee's Provident Fund Act.

21. EXTRA AND SUBSTITUTED ITEM:

21.1 The rates for extra items/substituted items of work, ordered to be operated / executed shall be derived as under:

- a) If the item of work is similar to the item for which, the bidder has quoted rates in SOR, the quoted rate shall be applicable.
- b) If the rate for the item does not appear in the SOR, the rate shall be derived from similar items of work indicated in SOR.
- c) The rates for those items of work which cannot be derived from quoted rates in the SOR shall be derived from the prevailing market rates of material and labour plus 10% towards contractor's overheads and profits. The opinion of the Engineer in charge as to the current market rates for materials and the quantum of labour and material involved per unit shall be final and binding on the contractor.

For this purpose and for the purpose of sub-clause (c) above, the coefficient of labour, material and wastage shall be adopted from the CPWD analysis of rates/standard schedule of rates as decided by the ENGINEER-IN-CHARGE. The CONTRACTOR shall submit vouchers /quotations in proof of rates paid /likely to be paid for material and labour.

Above provisions for derivation of rates of extra items/substituted items shall supersede the provisions indicated in GCC.

22. GUARANTEES AND WARRANTIES:

22.1 All manufacturer's warranties and guaranties for equipment supplied by the CONTRACTORS shall be passed on the EMPLOYER. Further, guarantees/warranties for any work carried out to specialized agencies shall also be passed on the EMPLOYER.

23. EXTENSION FOR TIME OF COMPLETION FOR ADDITION, ALTERATION AND SUBSTITUTED WORK:

- a) In case of any addition alteration or substitution work, the time of completion of work shall be extended in the proportion to the value of altered, additional or substituted work that it bears to the original contract value of work and time. Over and above this, a further period to the extent of 20% of such extension shall be allowed to the contractor.
- b) The contractor shall not be entitled to increase in prices or for any compensation whatsoever on account of the extension of time allowed.
- c) Any extension of time granted under the provision of this clause shall be without prejudice to other conditions of contract and will not absolve the contractor from the obligations of other clauses under the contract.

The decision of the EMPLOYER in this regard will be final and binding on the CONTRACTOR.

24. ALTERATIONS, ADDITIONS AND OMISSION:

- 24.1** The Architect make any variation of the form, quality or quantity of the works or any part thereof that may, in his opinion, be necessary and for that purpose or if for any other reason it shall, in his opinion be desirable he shall have power to order in writing to the contractor to do and the contractor shall do any of the following:
- a) Increase or decrease in the quantity of any work included in the contract.
 - b) Omit any such work.
 - c) Change the character or quality or kind of any such work.
 - d) Change the levels, lines, position and dimension of any part of the works and
 - e) Execute additional work of any kind necessary for the completion of the works and no such variation shall in any way vitiate or invalidate the contract. But the value, if any of all such variations, shall be taken into account in ascertaining the amount of the contract price.

25. RESPONSIBILITY FOR PROCUREMENT:

- 25.1** Sole responsibility rests with CONTRACTOR for procurement of all materials required for completion work within the stipulated time.

26. SALES TAX / TURN OVER TAX:

- 26.1** Tenderer should quote all inclusive prices including the liability of all types of taxes, duties and sales tax on works contract tax (if any) imposed by State/Central/Local Government bodies from time to time. Sales tax on works contract if applicable will be deducted at source as per the rules.

27. INCOME TAX:

- 27.1** Income tax deductions as per Income Tax rules shall be made from CONTRACTOR's running account bills unless specific exemption has been obtained by the CONTRACTOR from the Income Tax Dept. and documentary evidence to this effect has been submitted to the EMPLOYER.

28. APPROVALS:

- 28.1** The CONTRACTOR shall furnish to the ENGINEER-IN-CHARGE for approval samples of all material to be used in the item/work. Such samples shall be submitted before item/work is commenced in advance. It is the responsibility of the CONTRACTOR to arrange for tests as required by ENGINEER-IN-CHARGE at his own cost. The material representing approved samples shall only be used for the construction and installation. CONTRACTOR shall procure materials as indicated in list of approved makes (if given) / or materials with ISI certification may also be used after approval of ENGINEER-IN-CHARGE.

29. SEALED TENDER:

- 29.1** The tenders shall be submitted in sealed envelopes as mentioned in clause no. 3.0 of General Conditions of Contract. All the tender papers issued (Vol. I & II) and all supporting documents/credentials authenticating the capability/resources of the CONTRACTORS and EMD shall be submitted along with the tendered offer.

30. SECURED ADVANCE AGAINST DELIVERY OF MATERIALS:

- i) Secured advance on materials: 75% of the cost of the following materials to be paid :-
- i) Cement
 - ii) Steel

The above items which are in the opinion of the Engineer-in-charge reasonably required in accordance with the contract and have been brought to site for incorporation in the works and are safe-guarded against loss, due to any cause whatsoever, to the satisfaction of the Engineer-in-charge to the storage or misuse of the materials and against the expenses entitled for their proper watch and safe custody. The contractor shall execute necessary indemnity/hypothecation bonds and complete other formalities as stipulated by owner/Engineer-in-charge.

- iii) Recoveries of advance so made would not be postponed until the whole of the work entrusted to the contractor is completed. They should be adjusted from his bills for work done as the materials are used, the necessary deduction being made whenever the item of work in which they are used are billed for.
- iv) The cost of materials for the purpose of payment as secured advance shall be as per the voucher / cash memo produced by the contractor against the materials and accepted by EMPLOYER/CONSULTANT.
- v) Secured advance payment against materials at site shall be payable only through R.A. bills and not separately as and when the contractor brings the materials to the site. All secured advance bills shall be treated as running account bills of the contractor.

31. VARIATIONS IN QUANTITIES OF ITEMS DURING EXECUTION:

31.1 During execution of item/work variation in individual quantities may be up to any limit (plus and minus) as per the site requirement. The CONTRACTOR shall be bound to execute them at the rates quoted by him. BCPL also reserves the right to split the item/work in full or in part during its execution (depending upon exigencies of work) without assigning any reason thereof. The decision of ENGINEER-IN-CHARGE shall be final and binding on the contractor in this regard.

32. SPECIAL NOTE TO TENDERER:

- a) The Special Conditions of Contract supersede the relevant clauses of General Conditions of contract.
- b) Supervision and conduct of all the personal deployed by the contractors shall be the sole responsibility of the CONTRACTOR.
- c) The CONTRACTOR should issue his own identity card to his personal after verifying their character and antecedents through appropriate authorities and BCPL shall have no role on it whatsoever.
- d) The payments of wages to the employees employed by the CONTRACTOR are to be disbursed by CONTRACTOR or his representatives in the presence of BCPL representative and payment register shall be signed by BCPL representatives.

33. ELECTRICAL WORKS:

33.1 Subject to provisions of the General Conditions of Contract, the inspection and tests as required under Indian Electricity Rules – 1956 and prescribed in I.S 732 (Part-III) – 1982 shall be conducted.

33.2 All tests clearances and certificates required by the State Government authorities for energizing / commissioning the electrical system laid by the contractor shall be obtained by the contractor shall perform such tests and undertake such rectification and or charges as may be required.

33.3 The Contractor shall have a valid electrical contractor's license for working in Assam State. The Contractor shall furnish a copy of the same to Engineer – In – Charge before commencement of any electrical work or work pertaining to electrical system. No electrical work or work pertaining to electrical system(s) shall be permitted to be executed without valid Electrical Contractors License being produced by the Contractor.

If the bidder does not have valid electrical license, they shall engage suitable sub contractor for electrical works after obtaining approval from Engineer – In – Charge. In such event, the contractor

shall furnish the credentials of the sub contractors who have executed the similar electrical works as given in the bidding documents, immediately after award but not less than 15 days from the date of award of work to Engineer – In – Charge, for their review and approval. Bidder shall submit a confirmation to this effect in their bid.

34. SPECIALIZED JOBS:

- 34.1** The Contractor is bound to carry out the specialized jobs by the specialized agencies (for anti termite, water proofing, external painting etc.) as per the desire of the ENGINEER-IN-CHARGE. Contractor should arrange for the guarantees / warrantees as issued by the Company for the job carried out by them.

35. TERMS OF PAYMENT:

35.1 PAYMENT OF RUNNING BILLS:

100% payment shall be released on completion of item / work as certified in the R.A bills after affecting the necessary deductions as stipulated elsewhere in the Contract Document for Security Deposit, Taxes etc.

35.2 PAYMENT OF FINAL BILL:

CONTRACTOR must submit his final bill within sixty days of completion of the work and payment of the final bill shall be made to the CONTRACTOR within 120 days of the submission of the bill and after completion of all obligations under the CONTRACT.

- 35.3** The bills shall be submitted in a printed form in quadruplicate along with soft copy of bill. Security deposit and other taxes as applicable shall be deducted from the bills. Payment of running bills shall be made to the contractor within 30 days of the submission of the bill to ENGINEER-IN-CHARGE.

All payments shall be made in Indian Currency.

35.4 MODE OF PAYMENT:

NAME OF WORK:

EXTERNAL WATER SUPPLY AT BCPL AND CISF TOWNSHIP, OVERHEAD AND UNDER GROUND WATER TANK, PUMP HOUSE, SECURITY OFFICE AND TELECOM/IT EQUIPMENT ROOM AT BCPL TOWNSHIP AND SUBSTATION AT BCPL AND CISF TOWNSHIP FOR M/S BRAHMAPUTRA CRACKER & POLYMER LIMITED AT LEPETKATA, DIBRUGARH, (ASSAM)

No adhoc payment will be made.

GENERAL CONDITIONS OF CONTRACT (GCC)

Wherever written as "GAIL" in GCC should be read as "BCPL"

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SUBMISSION OF TENDER

From :

M/s

To :

Brahmaputra Cracker & Polymer Ltd.

Main Fire Station Building,

BCPL Project Site, Lepetkata-786007

Dibrugarh, Assam

1. I/We hereby tender for execution of the WORKS of -----
-----as per TENDER DOCUMENT within the Time Schedule of completion of work for jobs, as separately signed and accepted by me/us, at the schedule of Rates quoted by me/us for the whole work in accordance with Notice/Letter Inviting Tender, General Conditions of Contract. Special Conditions of Contract, Schedule of Rates Specifications for materials and workmanship, Drawings, Time Schedule of Completion of job, and other documents and papers, all as detailed in the tender documents.
2. It has been explained to me/us that the time stipulated for jobs and completion of WORKS in all respects and in different stages mentioned in the "Time Schedule" of completion of jobs and signed and accepted by me/us is the essence of the CONTRACT. I/We agree that in the case of failure on my our part to strictly observe the Time of Completion mentioned for jobs or any of them and to the final Completion of WORK in all respects according to the schedule set out in the said "Time Schedule" of completion of jobs, I/We shall pay compensation to the OWNER as per provisions and stipulations contained in General Conditions of Contract and I/We agree to recovery being made as specified therein. In exceptional circumstances, extension of time which shall always be in writing may, however, be granted by ENGINEER-IN-CHARGE at his entire discretion for some items of work, and I/We agree that such extension of time will not be counted for the extension of completion dates stipulated for job and for the Final Completion of WORK as stipulated in the said "Time Schedule" of completion of jobs.
3. I/We agree to pay the Earnest Money and Security Deposit and accept the terms and conditions laid down in the memorandum below in this respect.

MEMORANDUM

- | | | |
|-----|-----------------------------|----------|
| (a) | General Description of Work | |
| (b) | Earnest Money | (Rupees) |

The Earnest Money is payable in the manner set out in para 5 below.

The Earnest Money, if the tender is accepted, will be adjusted against the Security Deposit, when Earnest Money is paid by demand draft only.

- | | | |
|-----|--------------------------|-----------------------------------|
| (c) | Security deposit will be | 10% of the CONTRACT amount, which |
|-----|--------------------------|-----------------------------------|

paid in the manner set out in the General Conditions of Contract / Special Conditions of Contract.

- (d) Time allowed for starting work From the date of issue of LOI / FOI/ LOA.
4. Should this tender be accepted, I/We hereby agree to abide by and fulfill all terms and conditions referred to above and in default thereof, to forfeit and pay to the OWNER or its successors or its authorized nominees such sums of money as are stipulated in conditions contained in General Tender Notice and other Tender Documents.
5. I/We hereby pay the Earnest Money of Rs.-----
(Rupees-----in Bank Demand Draft/Banker's Cheque No.-----issued by -----
--(name and office of the State Bank of India or any nationalized Bank) in favour of Brahmaputra Cracker & Polymer Ltd.
6. If I/We fail to commence the work specified in the Memorandum in Para (3) above, or I/We agree that the said OWNER or its successors without prejudice to any other right or remedy be at liberty to forfeit the said Earnest Money in full, otherwise the said earnest Money shall be retained by OWNER towards the security Deposit specified in (3) above. The said OWNER shall also be at liberty to cancel the Notice of Acceptance of Tender if I/We fail to deposit the Security Deposit as aforesaid or to execute and Agreement or to start WORK as stipulated in the Tender Documents.

I/we enclosed herewith evidence of my/ our experience of execution of works of similar nature and magnitude carried out by me/us in the prescribed proforma and also the income-Tax and sales Tax Clearance/Certificates.

Dated the _____ day of _____ 2011

Witness :

Name in Block Letters :

Address :

Yours faithfully,

Signature of Bidder (s)with the seal of the Firm

Name and Designation of authorized person signing the tender on behalf of the Bidder (s)

GENERAL CONDITIONS OF CONTRACT

SECTION- I DEFINITIONS

1. DEFINITION OF TERMS:

1.1 In this CONTRACT (as here-in-after defined) the following words and expressions shall have the meanings hereby assigned to them except where the context otherwise required.

- 1.1.1. The EMPLOYER/COMPANY/BCPL means Brahmaputra Cracker & Polymer Ltd., a public limited company, incorporated under the Company's act 1956 and having its Registered office at Hotel Brahmaputra Ashok, M. G. Road, Guwahati – 781 001 and includes its successors and assigns.
- 1.1.2. The "CONTRACTOR" means the person or the persons, firm or Company or corporation whose tender has been accepted by the EMPLOYER and includes the CONTRACTOR's legal Representatives his successors and permitted assigns.
- 1.1.3. The ENGINEER/ENGINEER-IN-CHARGE" shall mean the person designated from time to time by the GAIL and shall include those who are expressly authorized by him to act for and on his behalf for operation of this CONTRACT.
- 1.1.4. The "WORK" shall mean and include all items and things to be supplied/ done and services and activities to be performed by the CONTRACTOR in pursuant to and in accordance with CONTRACT or part thereof as the case may be and shall include all extra, additional, altered or substituted works as required for purpose of the CONTRACT.
- 1.1.5. The "PERMANENT WORK" means and includes works which will be incorporated in and form a part of the work to be handed over to the EMPLOYER by the CONTRACTOR on completion of the CONTRACT.
- 1.1.6. "CONSTRUCTION EQUIPMENT" means all appliances/equipment and things whatsoever nature for the use in or for the execution, completion, operation, or maintenance of the work or temporary works (as hereinafter defined) but does not include materials or other things intended to form or to be incorporated into the WORK, or camping facilities.
- 1.1.7. "CONTRACT DOCUMENTS" means collectively the Tender Documents, Designs, Drawings, Specification, Schedule of Quantities and Rates, Letter of Acceptance and agreed variations if any, and such other documents constituting the tender and acceptance thereof.
- 1.1.8. CONSULTANT: means M/s Rajkhowas Aarchi who are the consulting engineer to the Employer for this project and having registered office at M.D. Road, Chandmari, Guwahati - 03
- 1.1.9. The "SUB-CONTRACTOR" means any person or firm or Company (other than the CONTRACTOR) to whom any part of the work has been entrusted by the CONTRACTOR, with the written consent of the ENGINEER-IN-CHARGE, and the legal representatives, successors and permitted assigns of such person, firm or company.
- 1.1.10. The "CONTRACT" shall mean the Agreement between the EMPLOYER and the CONTRACTOR for the execution of the works including therein all contract documents.
- 1.1.11. The "SPECIFICATION" shall mean all directions the various technical specifications, provisions attached and referred to the Tender Documents which pertain to the method and manner of performing the work or works to the quantities and qualities of the work or works and the materials to be furnished under the CONTRACT for the work or works, as may be amplified or modified by the GAIL or ENGINEER-IN-CHARGE during the performance of CONTRACT in order to provide the unforeseen conditions or in the best interests of the work or works. It shall also include the latest edition of relevant Standard Specifications including all addenda/corrigenda published before entering into CONTRACT.
- 1.1.12. The "DRAWINGS" shall include maps, plans and tracings or prints or sketches thereof with any modifications approved in writing by the ENGINEER- IN-CHARGE and such other drawing as may, from time to time, be furnished or approved in writing by the ENGINEER-IN-CHARGE.
- 1.1.13. The "TENDER" means the proposal along with supporting documents submitted by the CONTRACTOR for consideration by the EMPLOYER.
- 1.1.14. The "CHANGE ORDER" means an order given in writing by the ENGINEER-IN-CHARGE to effect additions to or deletion from and alteration in the works.

- 1.1.15. The "COMPLETION CERTIFICATE" shall mean the certificate to be issued by the ENGINEER-IN-CHARGE when the works have been completed entirely in accordance with CONTRACT DOCUMENT to his satisfaction.
- 1.1.16. The "FINAL CERTIFICATE" in relation to a work means the certificate regarding the satisfactory compliance of various provision of the CONTRACT by the CONTRACTOR issued by the ENGINEER-IN-CHARGE/EMPLOYER after the period of liability is over.
- 1.1.17. "DEFECT LIABILITY PERIOD" in relation to a work means the specified period from the date of COMPLETION CERTIFICATE upto the date of issue of FINAL CERTIFICATE during which the CONTRACTOR stands responsible for rectifying all defects that may appear in the works executed by the CONTRACTOR in pursuance of the CONTRACT and includes warranties against Manufacturing/Fabrication/ Erection/Construction defects covering all materials plants, equipment, components, and the like supplied by the CONTRACTOR, works executed against workmanship defects.
- 1.1.18. The "APPOINTING AUTHORITY" for the purpose of arbitration shall be the CHAIRMAN and MANAGING DIRECTOR or any other person so designated by the EMPLOYER.
- 1.1.19. "TEMPORARY WORKS" shall mean all temporary works of every kind required in or about the execution, completion or maintenance of works.
- 1.1.20. "PLANS" shall mean all maps, sketches and layouts as are incorporated in the CONTRACT in order to define broadly the scope and specifications of the work or works, and all reproductions thereof.
- 1.1.21. "SITE" shall mean the lands and other places on, under, in or through which the permanent works are to be carried out and any other lands or places provided by the EMPLOYER for the purpose of the CONTRACT.
- 1.1.22. "NOTICE IN WRITING OR WRITTEN NOTICE" shall mean a notice in written, typed or printed characters sent (unless delivered personally or otherwise proved to have been received by the addressee) by registered post to the latest known private or business address or registered office of the addressee and shall be deemed to have been received in the ordinary course of post it would have been delivered.
- 1.1.23. "APPROVED" shall mean approved in writing including subsequent written confirmation of previous verbal approval and "APPROVAL" means approval in writing including as aforesaid.
- 1.1.24. "LETTER OF INTENT/FAX OF INTENT" shall mean intimation by a Fax/Letter to Tenderer(s) that the tender has been accepted in accordance with the provisions contained in the letter.
- 1.1.25. "DAY" means a day of 24 hours from midnight to midnight irrespective of the number of hours worked in that day.
- 1.1.26. "WORKING DAY" means any day which is not declared to be holiday or rest day by the EMPLOYER.
- 1.1.27. "WEEK" means a period of any consecutive seven days.
- 1.1.28. "METRIC SYSTEM" - All technical documents regarding the construction of works are given in the metric system and all work in the project should be carried out according to the metric system. All documents concerning the work shall also be maintained in the metric system.
- 1.1.29. "VALUE OF CONTRACT" or "TOTAL CONTRACT PRICE" shall mean the sum accepted or the sum calculated in accordance with the prices accepted in tender and/or the CONTRACT rates as payable to the CONTRACTOR for the entire execution and full completion of the work, including change order.
- 1.1.30. "LANGUAGE FOR DRAWINGS AND INSTRUCTION" All the drawings, titles, notes, instruction, dimensions, etc. shall be in English Language.
- 1.1.31. "MOBILIZATION" shall mean establishment of sufficiently adequate infrastructure by the CONTRACTOR at "SITE" comprising of construction equipments, aids, tools tackles including setting of site offices with facilities such as power, water, communication etc. establishing manpower organization comprising of Resident Engineers, Supervising personnel and an adequate strength of skilled, semi-skilled and un-skilled workers, who with the so established infrastructure shall be in a position to commence execution of work at site(s), in accordance with the agreed Time Schedule of Completion of Work. "MOBILISATION" shall be considered to have been achieved, if the CONTRACTOR is able to establish infrastructure as per Time Schedule,

where so warranted in accordance with agreed schedule of work implementation to the satisfaction of ENGINEER-IN-CHARGE/ EMPLOYER.

- 1.1.32. "COMMISSIONING" shall mean pressing into service of the system including the plant(s), equipment(s), vessel(s), pipeline, machinery(ies), or any other section or sub-section of installation(s) pertaining to the work of the CONTRACTOR after successful testing and trial runs of the same. "COMMISSIONING" can be either for a completed system or a part of system of a combination of systems or sub-systems and can be performed in any sequence as desired by EMPLOYER and in a manner established to be made suited according to availability of pre-requisites. Any such readjustments made by EMPLOYER in performance of "COMMISSIONING" activity will not be construed to be violating CONTRACT provisions and CONTRACTOR shall be deemed to have provided for the same.

SECTION-II GENERAL INFORMATION

2. GENERAL INFORMATION

- 2.1 a) Location of Site: The proposed location of Project site is defined in the Special Conditions of Contract.
- b) Access by Road: CONTRACTOR, if necessary, shall build other temporary access roads to the actual site of construction for his own work at his own cost. The CONTRACTOR shall be required to permit the use of the roads so constructed by him for vehicles of any other parties who may be engaged on the project site. The CONTRACTOR shall also facilitate the construction of the permanent roads should the construction there of start while he is engaged on this work. He shall make allowance in his tender for any inconvenience he anticipates on such account. Non-availability of access roads, railway siding and railway wagons for the use of the CONTRACTOR shall in no case condone any delay in the execution of WORK nor be the cause for any claim for compensation against the EMPLOYER.
- 2.2 Scope of Work: The scope of WORK is defined in the Technical Part of the tender document. The CONTRACTOR shall provide all necessary materials, equipment, labour etc. for the execution and maintenance of the WORK till completion unless otherwise mentioned in the Tender Document.
- 2.3 Water Supply: Contractor will have to make his own arrangements for supply of water to his labour camps and for works. All pumping installations, pipe net work and distribution system will have to be carried out by the Contractor at his own risk and cost. Alternatively the Employer at his discretion may endeavour to provide water to the Contractor at the Employer's source of supply provided the Contractor makes his own arrangement for the water meter which shall be in custody of the Employer and other pipe net works from source of supply and such distribution pipe network shall have prior approval of the Engineer-in-Charge so as not to interfere with the layout and progress of the other construction works. In such case, the rate for water shall be deducted from the running account bills. However, the Employer does not guarantee the supply of water and this does not relieve the Contractor of his responsibility in making his own arrangement and for the timely completion of the various works as stipulated.
- 2.4 Power Supply:
- 2.4.1 Subject to availability, EMPLOYER will supply power at 400/440 V at only one point at the nearest sub-station, from where the CONTRACTOR will make his own arrangement for temporary distribution. The point of supply will not be more than 500 m away from the CONTRACTOR'S premises. All the works will be done as per the applicable regulations and passed by the ENGINEER-IN-CHARGE. The temporary line will be removed forthwith after the completion of work or if there is any hindrance caused to the other works due to the alignment of these lines, the CONTRACTOR will re-route or remove the temporary lines at his own cost. The CONTRACTOR at his cost will also provide suitable electric meters, fuses, switches, etc. for purposes of payment to the EMPLOYER which should be in the custody and control of the EMPLOYER. The cost of power supply shall be payable to the EMPLOYER every month for Construction Works power which would be deducted from the running account bills. The EMPLOYER shall not, however, guarantee the supply of electricity nor have any liability in respect thereof. No claim for compensation for any failure or short supply of electricity will be admissible.

- 2.4.2 It shall be the responsibility of the CONTRACTOR to provide and maintain the complete installation on the load side of the supply with due regard to safety requirement at site. All cabling, equipment, installations etc. shall comply in all respects with the latest statutory requirements and safety provisions i.e., as per the Central/State Electricity Acts and Rules etc. The CONTRACTOR will ensure that his equipment and Electrical Wiring etc., are installed, modified, maintained by a licensed Electrician/Supervisor. A test certificate is to be produced to the ENGINEER-IN-CHARGE for his approval, before power is made available.
- 2.4.3 At all times, IEA regulations shall be followed failing which the EMPLOYER has a right to disconnect the power supply without any reference to the CONTRACTOR. No claim shall be entertained for such disconnection by the ENGINEER-IN-CHARGE. Power supply will be reconnected only after production of fresh certificate from authorized electrical supervisors.
- 2.4.4 The EMPLOYER is not liable for any loss or damage to the CONTRACTOR's equipment as a result of variation in voltage or frequency or interruption in power supply or other loss to the CONTRACTOR arising therefrom.
- 2.4.5 The CONTRACTOR shall ensure that the Electrical equipment installed by him are such that average power factors does not fall below 0.90 at his premises. In case power factor falls below 0.90 in any month, he will reimburse to the EMPLOYER at the penal rate determined by the EMPLOYER for all units consumed during the month.
- 2.4.6 The power supply required for CONTRACTOR's colony near the plant site will be determined by the EMPLOYER and shall be as per State Electricity Board's Rules and other statutory provisions applicable for such installations from time to time. In case of power supply to CONTRACTOR's colony, the power will be made available at a single point and the CONTRACTOR shall make his own arrangement at his own cost for distribution to the occupants of the colony as per Electricity Rules and Acts. The site and colony shall be sufficiently illuminated to avoid accidents.
- 2.4.7 The CONTRACTOR will have to provide and install his own lights and power meters which will be governed as per Central/State Government Electricity Rules. The metres shall be sealed by the EMPLOYER.
- 2.4.8 In case of damage of any of the EMPLOYER's equipment on account of fault, intentional or unintentional on the part of the CONTRACTOR, the EMPLOYER reserves the right to recover the cost of such damage from the CONTRACTOR's bill. Cost of HRC Fuses replaced at the EMPLOYER's terminals due to any fault in the CONTRACTOR's installation shall be to CONTRACTOR's account at the rates decided by the ENGINEER-IN-CHARGE.
- 2.4.9 Only motors upto 3 HP will be allowed to be started direct on line. For motors above 3 HP and upto 100 HP a suitable Starting device approved by the ENGINEER- IN-CHARGE shall be provided by the CONTRACTOR. For motors above 100 HP slipring induction motors with suitable starting devices as approved by the ENGINEER- IN-CHARGE shall be provided by the CONTRACTOR.
- 2.4.10 The CONTRACTOR shall ensure at his cost that all electrical lines and equipment and all installations are approved by the State Electricity Inspector before power can be supplied to the EMPLOYER.
- 2.4.11 The total requirement of power shall be indicated by the tenderer alongwith his tender.
- 2.5 Land for Contractor's Field Office, Godown and Workshop: The EMPLOYER will, at his own discretion and convenience and for the duration of the execution of the work make available near the site, land for construction of CONTRACTOR's Temporary Field Office, godowns workshops and assembly yard required for the execution of the CONTRACT. The CONTRACTOR shall at his own cost construct all these temporary buildings and provide suitable water supply and sanitary arrangement and get the same approved by the ENGINEER-IN-CHARGE. On completion of the works undertaken by the CONTRACTOR, he shall remove all temporary works erected by him and have the SITE cleaned as directed by ENGINEER-IN-CHARGE. If the CONTRACTOR shall fail to comply with these requirements, the ENGINEER-IN-CHARGE may at he expenses of the CONTRACTOR remove such surplus, and rubbish materials and dispose off the same as he deems fit and get the site cleared as aforesaid; and CONTRACTOR shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such surplus materials disposed off as aforesaid. But the EMPLOYER reserves the right

to ask the CONTRACTOR any time during the pendency of the CONTRACT to vacate the land by giving 7 days notice on security reasons or on national interest or otherwise. Rent may be charged for the land so occupied from contractor by the Employer. The CONTRACTOR shall put up temporary structures as required by them for their office, fabrication shop and construction stores only in the area allocated to them on the project site by the EMPLOYER or his authorised representative. No tea stalls/canteens should be put up or allowed to be put up by any CONTRACTOR in the allotted land or complex area without written permission of the EMPLOYER. No unauthorised buildings, constructions or structures should be put up by the CONTRACTOR anywhere on the project site. For uninterrupted fabrication work, the CONTRACTOR shall put up temporary covered structures at his cost within Area in the location allocated to them in the project site by the EMPLOYER or his authorised representative. No person except for authorised watchman shall be allowed to stay in the plant area/CONTRACTOR's area after completion of the day's job without prior written permission from ENGINEER-IN-CHARGE.

2.6 Land for Residential Accommodation:-No Land shall be made available for residential accommodation for staff and labour of CONTRACTOR.

SECTION-III GENERAL INSTRUCTIONS TO TENDERERS

3. SUBMISSION OF TENDER:

- 3.1 TENDER must be submitted without making any additions, alterations, and as per details given in other clauses hereunder. The requisite details shall be filled in by the TENDERER at space provided under "Submission of Tender at the beginning of GCC of Tender Document. The rate shall be filled only in the schedule given in this Tender Document.
- 3.2 Addenda/Corrigenda to this Tender Document, if issued, must be signed, submitted along with the Tender Document. The tenderer should write clearly the revised quantities in Schedule of Rates of Tender Document and should price the WORK based on revised quantities when amendments of quantities are issued in addenda.
- 3.3 Covering letter along with its enclosures accompanying the Tender Document and all further correspondence shall be submitted in duplicate.
- 3.4 Tenderers are advised to submit quotations based strictly on the terms and conditions and specifications contained in the Tender Documents and not to stipulate any deviations.
- 3.5 Tenders should always be placed in double sealed covers, superscribing ["QUOTATION DO NOT OPEN" Tender for _____ Project of BCPL due for opening on _____]. The *Full Name, Address and Telegraphic Address, Fax No. of the Tenderers* shall be written on the bottom left hand corner of the sealed cover.

4. DOCUMENTS:

- 4.1 General: The tenders as submitted, will consist of the following:
- (i) Complete set of Tender Documents (Original) as sold duly filled in and signed by the tenderer as prescribed in different clauses of the Tender Documents.
 - (ii) Earnest money in the manner specified in Clause 6 hereof.
 - (iii) Power of Attorney or a true copy thereof duly attested by a Gazetted Officer in case an authorised representative has signed the tender, as required by Clause 14 hereof.
 - (iv) Information regarding tenderers in the proforma enclosed.
 - (v) Details of work of similar type and magnitude carried out by the Tenderer in the proforma provided in the tender document.
 - (vi) Organisation chart giving details of field management at site, the tenderer proposes to have for this job.
 - (vii) Details of construction plant and equipments available with the tenderer for using in this work.
 - (viii) Solvency Certificate from Scheduled Bank to prove the financial ability to carry out the work tendered for.
 - (ix) Latest Balance Sheet and Profit & Loss Account duly audited.
 - (x) Details of present commitment as per proforma enclosed to tender.
 - (xi) Data required regarding SUB-CONTRACTOR(s)/ Supplier/ Manufacturers and other technical informations the tenderer wish to furnish.

- (xii) Provident fund registration certificate
- (xiii) List showing all enclosures to tender.

- 4.2 All pages are to be Initiated: All signatures in Tender Documents shall be dated, as well as, all the pages of all sections of Tender Documents shall be initialed at the lower right hand corner and signed wherever required in the tender papers by the TENDERER or by a person holding power of attorney authorising him to sign on behalf of the tenderer before submission of tender.
- 4.3 Rates to be in Figures and Words: The tender should quote in English both in figures as well as in words the rates and amounts tendered by him in the Schedule of Rates of Tender submitted by the CONTRACTOR for each item and in such a way that interpolation is not possible. The amount for each item should be worked out and entered and requisite total given of all items, both in figures and in words. The tendered amount for the work shall be entered in the tender and duly signed by the Tenderer. If some discrepancies are found between the RATES in FIGURES and WORDS or the AMOUNT shown in the tender, the following procedure shall be followed:
- a) When there is difference between the rates in figures and words, the rate which corresponds to the amount worked out by the tenderer shall be taken as correct.
 - b) When the rate quoted by the tenderer in figures and words tally but the amount is incorrect the rate quoted by the tenderer shall be taken as correct.
 - c) When it is not possible to ascertain the correct rate by either of above methods, the rate quoted in words shall be taken as correct.
- 4.4 Corrections and Erasures: All correction(s) and alteration(s) in the entries of tender paper shall be signed in full by the TENDERER with date. No erasure or over writing is permissible.
- 4.5 Signature of Tenderer:
- 4.5.1 The TENDERER shall contain the name, residence and place of business of person or persons making the tender and shall be signed by the TENDERER with his usual signature. Partnership firms shall furnish the full names of all partners in the tender. It should be signed in the partnership's name by all the partners or by duly authorised representatives followed by the name and designation of the person signing. Tender by a corporation shall be signed by an authorised representative, and a Power of Attorney in that behalf shall accompany the tender. A copy of the constitution of the firm with names of all partners shall be furnished.
- 4.5.2 When a tenderer signs a tender in a language other than English, the total amount tendered should, in addition, be written in the same language. The signature should be attested by at least one witness.
- 4.6 Witness: Witness and sureties shall be persons of status and property and their names, occupation and address shall be stated below their signature.
- 4.7 Details of Experience: The tenderer should furnish, along with his tender, details of previous experience in having successfully completed in the recent past works of this nature, together with the names of Employers, location of sites and value of contract, date of commencement and completion of work, delays if any, reasons of delay and other details along with documentary evidence(s).
- 4.8 Liability of Government of India: It is expressly understood and agreed by and between Bidder or/Contractor and M/s BCPL, and that M/s BCPL, is entering into this agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood and agreed that the Government of India is not a party to this agreement and has no liabilities, obligations or rights hereunder. It is expressly understood and agreed that M/s BCPL is an independent legal entity with power and authority to enter into contracts solely on its own behalf under the applicable Laws of India and general principles of Contract Law. The Bidder/Contractor expressly agrees, acknowledges and understands that M/s BCPL is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the contract. Accordingly, Bidder/Contractor hereby expressly waives, releases and foregoes any and all actions or claims, including cross claims, impleader claims or counter claims against the Government of India arising out of this contract and covenants not to sue to Government of India as to any manner, claim, cause of action or thing whatsoever arising of or under this agreement.

5. TRANSFER OF TENDER DOCUMENTS:

5.1 Transfer of Tender Documents purchased by one intending tenderer to another is not permissible.

6. EARNEST MONEY:

6.1 The bidder must pay Earnest Money as given in the letter /notice inviting tenders and attach the official receipt with the tender failing which the tender is liable to be rejected and representatives of such tenderers will not be allowed to attend the tender opening. Earnest Money can be paid in Demand Drafts or Bank Guarantee or Banker's Cheque or Letter of Credit from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve Bank of India as scheduled foreign bank. However, other than the Nationalised Indian Banks, the banks whose BGs are furnished, must be commercial banks having net worth in excess of Rs. 100 crores and a declaration to this effect should be made by such commercial bank either in the bank guarantee itself or separately on a letter head. The bid guarantee shall be submitted in the prescribed format.

Note: The Bank Guarantee so furnished by the tenderer shall be in the proforma prescribed by the EMPLOYER. No interest shall be paid by the EMPLOYER on the Earnest Money deposited by the tenderer. The Bank Guarantee furnished in lieu of Earnest Money shall be kept valid for a period of "SIX MONTHS" from the date of opening of tender.(TWO MONTHS beyond the bid validity). The Earnest Money deposited by successful tenderer shall be forfeited if the Contractor fails to furnish the requisite Contract Performance Security as per clause 24 hereof and /or fails to start work within a period of 15 days or fails to execute the AGREEMENT within 15 days of the receipt by him of the Notification of Acceptance of Tender.

Note: The Earnest Money of the unsuccessful bidder will be returned by EMPLOYER/CONSULTANT, directly to the tenderer (s), within a reasonable period of time but not later than 30 days after the expiration of the period of bid validity prescribed by EMPLOYER.

7 VALIDITY:

7.1 Tender submitted by tenderers shall remain valid for acceptance for a period of "4 MONTHS" from the date of opening of the tender. The tenderers shall not be entitled during the said period of 4 months, without the consent in writing of the EMPLOYER, to revoke or cancel his tender or to vary the tender given or any term thereof. In case of tender revoking or canceling his tender or varying any term in regard thereof without the consent of EMPLOYER in writing, the EMPLOYER shall forfeit Earnest Money paid by him alongwith tender.

8 ADDENDA/CORRIGENDA

8.1 Addenda/ Corrigenda to the Tender Documents will be issued in duplicate prior to the date of opening of the tenders to clarify documents or to reflect modification in design or CONTRACT terms.

8.2 Each addenda/ corrigendum issued will be issued in duplicate to each person or organisation to whom set of Tender Documents has been issued. Recipient will retain tenderer's copy of each Addendum/Corrigendum and attach original copy duly signed along with his offer. All Addenda/Corrigenda issued shall become part of Tender Documents.

9 RIGHT OF EMPLOYER TO ACCEPT OR REJECT TENDER:

9.1 The right to accept the tender will rest with the EMPLOYER. The EMPLOYER, however, does not bind himself to accept the lowest tender, and reserves to itself the authority to reject any or all the tenders received without assigning any reason whatsoever. At the option of the Employer, the work for which the tender had been invited, may be awarded to one Contractor or split between more than one bidders, in which case the award will be made for only that part of the work, in respect of which the bid has been accepted. The quoted rates should hold good for such eventualities. Tenders in which any of the particulars and prescribed information are missing or are incomplete in any respect and/or the prescribed conditions are not fulfilled are liable to be rejected. The Tender containing uncalled for remarks or any additional conditions are liable to be rejected. Canvassing in connection with tenders is strictly prohibited and tenders submitted by the Tenderers who resort to canvassing will be liable to rejection.

10 TIME SCHEDULE:

- 10.1 The WORK shall be executed strictly as per the TIME SCHEDULE specified in TENDER/CONTRACT Document. The period of construction given in Time Schedule includes the time required for mobilisation as well as testing, rectifications if any, retesting and completion in all respects to the entire satisfaction of the ENGINEER-IN-CHARGE.
- 10.2 A joint programme of execution of the WORK will be prepared by the ENGINEER-IN-CHARGE and CONTRACTOR based on priority requirement of this project. This programme will take into account the time of completion mentioned in 10.1 above and the time allowed for the priority works by the ENGINEER-IN-CHARGE.
- 10.3 Monthly/Weekly construction programme will; be drawn up by the ENGINEER-IN-CHARGE jointly with the CONTRACTOR, based on availability of work fronts and the joint construction programme as per 10.2 above. The CONTRACTOR shall scrupulously adhere to these targets /programmes by deploying adequate personnel, construction tools and tackles and he shall also supply himself all materials of his scope of supply in good time to achieve the targets/programmes. In all matters concerning the extent of targets set out in the weekly and monthly programmes and the degree of achievements the decision of the ENGINEER-IN-CHARGE will be final and binding on the CONTRACTOR.

11 TENDERER'S RESPONSIBILITY:

- 11.1 The intending tenderers shall be deemed to have visited the SITE and familiarized submitting the tender. Non-familiarity with the site conditions will not be considered a reason either for extra claims or for not carrying out the works in strict conformity with the DRAWINGS and SPECIFICATIONS or for any delay in performance.

12 RETIRED GOVERNMENT OR COMPANY OFFICERS:

- 12.1 No Engineer of Gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the States/ Central Government or of the EMPLOYER is allowed to work as a CONTRACTOR for a period of two years after his retirement from Government Service, or from the employment of the EMPLOYER without the previous permission of the EMPLOYER. The CONTRACT, if awarded, is liable to be cancelled if either the CONTRACTOR or any of his employees is found at any time to be such a person, who has not obtained the permission of the State/Central Government or of the EMPLOYER as aforesaid before submission of tender, or engagement in the CONTRACTOR'S service as the case may be.

13 SIGNING OF THE CONTRACT:

- 13.1 The successful tenderer shall be required to execute an AGREEMENT in the proforma attached with TENDER DOCUMENT within 15 days of the receipt by him of the Notification of Acceptance of Tender. In the event of failure on the part of the successful tenderer to sign the AGREEMENT within the above stipulated period, the Earnest Money or his initial deposit will be forfeited and the acceptance of the tender shall be considered as cancelled.

14 FIELD MANAGEMENT & CONTROLLING/COORDINATING AUTHORITY:

- 14.1 The field management will be the responsibility of the ENGINEER-IN-CHARGE, who will be nominated by the EMPLOYER. The ENGINEER-IN-CHARGE may also authorize his representatives to assist in performing his duties and functions.
- 14.2 The ENGINEER-IN-CHARGE shall coordinate the works of various agencies engaged at site to ensure minimum disruption of work carried out by different agencies. It shall be the responsibility of the CONTRACTOR to plan and execute the work strictly in accordance with site instructions to avoid hindrance to the work being executed by other agencies.

15 NOTE TO SCHEDULE OF RATES:

- 15.1 The Schedule of Rates should be read in conjunction with all the other sections of the tender.
- 15.2 The tenderer shall be deemed to have studied the DRAWINGS, SPECIFICATIONS and details of work to be done within TIME SCHEDULE and to have acquainted him of the condition prevailing at site.

- 15.3 Rates must be filled in the Schedule of Rates of original Tender Documents. If quoted in separate typed sheets no variation in item description or specification shall be accepted. Any exceptions taken by the tenderer to the Schedule of Rates shall be brought out in the terms and conditions of the offer.
- 15.4 The quantities shown against the various items are only approximate. Any increase or decrease in the quantities shall not form the basis of alteration of the rates quoted and accepted.
- 15.5 The EMPLOYER reserves the right to interpolate the rates for such items of work falling between similar items of lower and higher magnitude.

16 POLICY FOR TENDERS UNDER CONSIDERATION:

- 16.1 Only Those Tenders which are complete in all respects and are strictly in accordance with the Terms and Conditions and Technical Specifications of Tender Document, shall be considered for evaluation. Such Tenders shall be deemed to be under consideration immediately after opening of Tender and until such time an official intimation of acceptance /rejection of Tender is made by BCPL to the Bidder.
- 16.2 Zero Deviation: Bidders to note that this is a ZERO DEVIATION TENDER. BCPL will appreciate submission of offer based on the terms and conditions in the enclosed General Conditions of Contract (GCC), Special Conditions of Contract (SCC), Instructions to Bidders (ITB), Scope of Work, technical specifications etc. to avoid wastage of time and money in seeking clarifications on technical/ commercial aspects of the offer. Bidder may note that no technical and commercial clarifications will be sought for after the receipt of the bids. In case of any deviation/nonconformity observed in the bid, it will be liable for rejection.

17 AWARD OF CONTRACT:

- 17.1 The Acceptance of Tender will be intimated to the successful Tenderer by BCPL either by Telex/ Telegram/ Fax or by Letter or like means-defined as LETTER OF ACCEPTANCE OF TENDER.
- 17.2 BCPL will be the sole judge in the matter of award of CONTRACT and the decision of BCPL shall be final and binding.

18 CLARIFICATION OF TENDER DOCUMENT:

- 18.1 The Tender is required to carefully examine the Technical Specifications, Conditions of Contract, Drawings and other details relating to WORK and given in Tender Document and fully inform himself as to all conditions and matters which may in any way affect the WORK or the cost thereof. In case the Tenderer is in doubt about the completeness or correctness of any of the contents of the Tender Documents he should request in writing for an interpretation/clarification to BCPL in triplicate. GAIL will then issue interpretation/clarification to Tenderer in writing. Such clarifications and or interpretations shall form part of the Specifications and Documents and shall accompany the tender which shall be submitted by tenderer within time and date as specified in invitations to tender.
- 18.2 Verbal clarification and information given by BCPL or its employee(s) or its representatives shall not in any way be binding on BCPL.

19 LOCAL CONDITIONS:

- 19.1 It will be imperative on each tenderer to inform himself of all local conditions and factors which may have any effect on the execution of WORK covered under the Tender Document. In their own interest, the tenderer are requested to familiarise themselves with the Indian Income Tax Act 1961, Indian Companies Act 1956, Indian Customs Act 1962 and other related Acts and Laws and Regulations of India with their latest amendments, as applicable GAIL shall not entertain any requests for clarifications from the tenderer regarding such local conditions.
- 19.2 It must be understood and agreed that such factors have properly been investigated and considered while submitting the tender. No claim for financial or any other adjustments to VALUE OF CONTRACT, on lack of clarity of such factors shall be entertained.

20 ABNORMAL RATES:

- 20.1 The tenderer is expected to quote rate for each item after careful analysis of cost involved for the performance of the completed item considering all specifications and Conditions of Contract. This will avoid loss of profit or gain in case of curtailment or change of specification for any item. In case it is noticed that the rates quoted by the tenderer for any item are unusually high or unusually low, it will be sufficient cause for the rejection of the tender unless the EMPLOYER is convinced about the reasonableness after scrutiny of the analysis for such rate(s) to be furnished by the tenderer (on demand).

SECTION-IV GENERAL OBLIGATIONS

21 PRIORITY OF CONTRACT DOCUMENTS:

- 21.1 Except if and the extent otherwise provided by the Contract, the provisions of the General Conditions of Contract and Special Conditions shall prevail over those of any other documents forming part of the CONTRACT. Several documents forming the CONTRACT are to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies the same shall be explained and adjusted by the ENGINEER-IN-CHARGE who shall thereupon issue to the Contractor instructions thereon and in such event, unless otherwise provided in the Contract, the priority of the documents forming the Contract shall be as follows :
- (i) The Contract Agreement ;
 - (ii) The Letter of Acceptance;
 - (iii) The (Instructions to Bidders)ITB;
 - (iv) Special Conditions of Contract (SCC);
 - (v) General Conditions of Contract (GCC)
 - (vi) Any other document forming part of the Contract. Works shown in the DRAWING but not mentioned in the SPECIFICATIONS OR described in the SPECIFICATIONS without being shown in the DRAWINGS shall nevertheless be deemed to be included in the same manner as if they had been specifically shown upon the DRAWINGS and described in the SPECIFICATIONS.
- 21.2 Headings and Marginal Notes: All headings and marginal notes to the clauses of these General Conditions of Contract or to the SPECIFICATIONS or to any other Tender Document are solely for the purpose of giving a concise indication and not a summary of the contents thereof, and they shall never be deemed to be part thereof or be used in the interpretation or construction thereof the CONTRACT.
- 21.3 Singular and Plural: In CONTRACT DOCUMENTS unless otherwise stated specifically, the singular shall include the plural and vice versa wherever the context so requires.
- 21.4 Interpretation: Words implying 'Persons' shall include relevant 'Corporate Companies / Registered Associations/ Body of Individuals/ Firm of Partnership' as the case may be.

22 SPECIAL CONDITIONS OF CONTRACT:

- 22.1 Special Conditions of Contract shall be read in conjunction with the General Conditions of Contract, specification of Work, Drawings and any other documents forming part of this CONTRACT wherever the context so requires.
- 22.2 Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the CONTRACT so far as it may be practicable to do so.
- 22.3 Where any portion of the General Condition of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears the provisions of the Special Conditions of Contract shall be deemed to over-ride the provisions of the General Conditions of Contract and shall to the extent of such repugnancy, or variations, prevail.
- 22.4 Wherever it is mentioned in the specifications that the CONTRACTOR shall perform certain WORK or provide certain facilities, it is understood that the CONTRACTOR shall do so at his cost and the VALUE OF CONTRACT shall be deemed to have included cost of such performance and provisions, so mentioned.
- 22.5 The materials, design and workmanship shall satisfy the relevant INDIAN STANDARDS, the JOB SPECIFICATIONS contained herein and CODES referred to. Where the job specification stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.

23 CONTRACTOR TO OBTAIN HIS OWN INFORMATION:

23.1 The CONTRACTOR in fixing his rate shall for all purpose whatsoever reason may be, deemed to have himself independently obtained all necessary information for the purpose of preparing his tender and his tender as accepted shall be deemed to have taken into account all contingencies as may arise due to such information or lack of same. The correctness of the details, given in the Tender Document to help the CONTRACTOR to make up the tender is not guaranteed. The CONTRACTOR shall be deemed to have examined the CONTRACT DOCUMENTS, to have generally obtained his own information in all matters whatsoever that might affect the carrying out of the works at the schedules rates and to have satisfied himself to the sufficiency of his tender. Any error in description of quantity or omission therefrom shall not vitiate the CONTRACT or release the CONTRACTOR from executing the work comprised in the CONTRACT according to DRAWINGS and SPECIFICATIONS at the scheduled rates. He is deemed to have known the scope, nature and magnitude of the WORKS and the requirements of materials and labour involved etc., and as to what all works he has to complete in accordance with the CONTRACT documents whatever be the defects, omissions or errors that may be found in the DOCUMENTS. The CONTRACTOR shall be deemed to have visited surroundings, to have satisfied himself to the nature of all existing structures, if any, and also as to the nature and the conditions of the Railways, Roads, Bridges and Culverts, means of transport and communication, whether by land, water or air, and as to possible interruptions thereto and the access and egress from the site, to have made enquiries, examined and satisfied himself as to the sites for obtaining sand, stones, bricks and other materials, the sites for disposal of surplus materials, the available accommodation as to whatever required, depots and such other buildings as may be necessary for executing and completing the works, to have made local independent enquiries as to the sub-soil, subsoil water and variations thereof, storms, prevailing winds, climatic conditions and all other similar matters effecting these works. He is deemed to have acquainted himself as to his liability of payment of Government Taxes, Customs duty and other charges, levies etc. Any neglect or omission or failure on the part of the CONTRACTOR in obtaining necessary and reliable information upon the foregoing or any other matters affecting the CONTRACT shall not relieve him from any risks or liabilities or the entire responsibility from completion of the works at the scheduled rates and times in strict accordance with the CONTRACT. It is, therefore, expected that should the CONTRACTOR have any doubt as to the meaning of any portion of the CONTRACT DOCUMENT he shall set forth the particulars thereof in writing to EMPLOYER in duplicate, before submission of tender. The EMPLOYER may provide such clarification as may be necessary in writing to CONTRACT, such clarifications as provided by EMPLOYER shall form part of CONTRACT DOCUMENTS. No verbal agreement or inference from conversation with any effect or employee of the EMPLOYER either before, during or after the execution of the CONTRACT agreement shall in any way affect or modify and of the terms or obligations herein contained. Any change in layout due to site conditions or technological requirement shall be binding on the CONTRACTOR and no extra claim on this account shall be entertained.

24 CONTRACT PERFORMANCE SECURITY:

- 24.1 The CONTRACTOR shall furnish to the EMPLOYER, within 15 days from the date of notification of award, a security in the sum of 10% of the accepted value of the tender or the actual value of work to be done whichever is applicable due to any additional work or any other reasons, in the form of a Bank draft/Banker's cheque or Bank Guarantee or irrevocable Letter of credit (as per proforma enclosed) as Contract Performance Security with the EMPLOYER which will be refunded after the expiry of DEFECTS LIABILITY PERIOD.
- 24.2 CONTRACTOR can furnish the Contract Performance Security in the form of Demand Draft or through a Bank Guarantee or through an irrevocable Letter of Credit from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve Bank of India as scheduled foreign bank. However, other than the Nationalised Indian Banks, the banks whose BGs are furnished, must be commercial banks having net worth in excess of Rs. 100 crores and a declaration to this effect should be made by such commercial bank either in the bank guarantee itself or separately on a letter head. The bank guarantee or the Letter of Credit shall be submitted in the prescribed format.
- 24.3 If the CONTRACTOR/SUB-CONTRACTOR or their employees or the CONTRACTOR's agents and representatives shall damage, break, deface or destroy any property belonging to the EMPLOYER or others during the execution of the CONTRACT, the same shall be made good by the CONTRACTOR at his own

expenses and in default thereof, the ENGINEER-IN-CHARGE may cause the same to be made good by other agencies and recover expenses from the CONTRACTOR (for which the certificate of the ENGINEER-IN-CHARGE shall be final).

- 24.4 All compensation or other sums of money payable by the CONTRACTOR to the EMPLOYER under terms of this CONTRACT may be deducted from or paid by the encashment or sale of a sufficient part of his Contract Performance Security or from any sums which may be due or may become due to the CONTRACTOR by the EMPLOYER of any account whatsoever and in the event of his Contract Performance Security being reduced by reasons of any such deductions or sale of aforesaid, the CONTRACTOR shall within ten days thereafter make good in cash, bank drafts as aforesaid any sum or sums which may have been deducted from or realised by sale of his Contract Performance Security, or any part thereof. No interest shall be payable by the EMPLOYER for sum deposited as Contract Performance Security.
- 24.5 Failure of the successful bidder to comply with the requirements of this Clause shall constitute sufficient grounds for the annulment of the award and the forfeiture of bid security.

25 TIME OF PERFORMANCE:

- 25.1 Time for Mobilisation: The work covered by this CONTRACT shall be commenced within fifteen (15) days, the date of letter/Fax of Intent and be completed in stages on or before the dates as mentioned in the TIME SCHEDULE OF COMPLETION OF WORK. The CONTRACTOR should bear in mind that time is the essence of this agreement. Request for revision of construction time after tenders are opened will not receive consideration. The above period of fifteen (15) days is included within the overall COMPLETION SCHEDULE, not over and above the completion time to any additional work or any other reasons.
- 25.2 Time Schedule of Construction:
- 25.2.1 The general Time Schedule of construction is given in the TENDER DOCUMENT. CONTRACTOR should prepare a detailed monthly or weekly construction program jointly with the ENGINEER-IN-CHARGE within 15 days of receipt of LETTER/FAX OF INTENT or ACCEPTANCE OF TENDER. The WORK shall be executed strictly as per the Time Schedule given in the CONTRACT DOCUMENT. The period of construction given includes the time required for mobilisation testing, rectifications, if any, retesting and completion in all respects in accordance with CONTRACT DOCUMENT to the entire satisfaction of the ENGINEER-IN-CHARGE.
- 25.2.2 The CONTRACTOR shall submit a detailed PERT network within the time frame agreed above consisting of adequate number of activities covering various key phases of the WORK such as design, procurement, manufacturing, shipment and field erection activities within fifteen (15) days from the date of LETTER/FAX OF INTENT. This network shall also indicate the interface facilities to be provided by the EMPLOYER and the dates by which such facilities are needed.
- 25.2.3 CONTRACTOR shall discuss the network so submitted with the EMPLOYER and the agreed network which may be in the form as submitted with the EMPLOYER or in revised form in line with the outcome of discussions shall form part of the CONTRACT, to be signed within fifteen (15) days from the date of LETTER OF ACCEPTANCE OF TENDER. During the performance of the CONTRACT, if in the opinion of the EMPLOYER proper progress is not maintained suitable changes shall be made in the CONTRACTOR's operation to ensure proper progress. The above PERT network shall be reviewed periodically and reports shall be submitted by the CONTRACTOR as directed by EMPLOYER.

26 FORCE MAJEURE:

- 26.1 CONDITIONS FOR FORCE MAJEURE: In the event of either party being rendered unable by Force Majeure to perform any obligations required to be performed by them under the CONTRACT the relative obligation of the party affected by such Force Majeures shall upon notification to the other party be suspended for the period during which Force Majeures event lasts. The cost and loss sustained by the either party shall be borne by the respective parties. The term "Force Majeures" as employed herein shall mean acts of God, earthquake, war (declared or undeclared), revolts, riots, fires, floods, rebellions, explosions, hurricane, sabotage, civil commotions and acts and regulations of respective Government of the two parties, namely the EMPLOYER and the CONTRACTOR. Upon the occurrence of such cause(s) and upon its termination, the party alleging that it has been rendered unable as aforesaid thereby, shall notify the other party in writing immediately but not later than 72 (Seventy-two) hours of the alleged beginning and ending thereof giving full particulars and satisfactory evidence in support of its claim. Time for

performance of the relative obligation suspended by the Force Majeures shall then stand extended by the period for which such cause lasts. If deliveries of bought out items and/or works to be executed by the CONTRACTOR are suspended by Force Majeure conditions lasting for more than 2 (two) months the EMPLOYER shall have the option to terminate the CONTRACT or re-negotiate the contract provisions.

26.2 OUTBREAK OF WAR

26.2.1 If during the currency of the CONTRACT there shall be an out-break of war whether declared or not, in that part of the World which whether financially or otherwise materially affect the execution of the WORK the CONTRACTOR shall unless and until the CONTRACT is terminated under the provisions in this clause continue to use his best endeavour to complete the execution of the WORK, provided always that the EMPLOYER shall be entitled, at any time after such out-break of war to terminate or re-negotiate the CONTRACT by giving notice in writing to the CONTRACTOR and upon such notice being given the CONTRACT shall, save as to the rights of the parties under this clause and to the operation of the clauses entitled settlement of Disputes and Arbitration hereof, be terminated but without prejudice to the right of either party in respect of any antecedent breach thereof.

26.2.2 If the CONTRACT shall be terminated under the provisions of the above clause, the CONTRACTOR shall with all reasonable diligence remove from the SITE all the CONTRACTOR's equipment and shall give similar facilities to his SUB-CONTRACTORS to do so.

27 PRICE REDUCTION SCHEDULE:

27.1 Time is the essence of the CONTRACT. In case the CONTRACTOR fails to complete the WORK within the stipulated period, then, unless such failure is due to Force Majeure as defined in Clause 26 here above or due to EMPLOYER's defaults, the Total Contract price shall be reduced by ½ % of the total Contract Price per complete week of delay or part thereof subject to a maximum of 5 % of the Total Contract Price, by way of reduction in price for delay and not as penalty. The said amount will be recovered from amount due to the Contractor/ Contractor's Contract Performance Security payable on demand. The decision of the ENGINEER-IN-CHARGE in regard to applicability of Price Reduction Schedule shall be final and binding on the CONTRACTOR.

27.2 All sums payable under this clause is the reduction in price due to delay in completion period at the above agreed rate.

27.3 BONUS FOR EARLY COMPLETION (*)

BONUS FOR EARLY COMPLETION If the Contractor achieves completion of Works in all respect prior to the time schedule stipulated in the SCC, the Employer shall pay to the Contractor the relevant sum, if mentioned specifically in SCC, as bonus for early completion. The bonus for early completion, if provided specifically in SCC, shall be payable to the maximum ceiling of 2 ½ % of the total contract price.

(*) Partial earlier completion may not always produce net benefits to the Employer, for example where utilization of the completed Works requires (a) the fulfillment of all parts of the Contract (e.g. the training of personnel); or (b) the completion of all Sections (e.g. in pipeline laying, where early completion of the laying of pipeline would not be useful if the compressor is still under installation); or (c) certain seasonal effects to take place (e.g. onset of the rainy season, for impounding a reservoir); or (d) other circumstances. Also a more rapid drawdown of budgeted funds may be required. All such factors should be considered prior to the inclusion of a bonus clause in the Contract.

28 RIGHTS OF THE EMPLOYER TO FORFEIT CONTRACT PERFORMANCE SECURITY:

28.1 Whenever any claim against the CONTRACTOR for the payment of a sum of money arises out or under the CONTRACT, the EMPLOYER shall be entitled to recover such sum by appropriating in part or whole the Contract Performance Security of the CONTRACTOR. In the event of the security being insufficient or if no security has been taken from the CONTRACTOR, then the balance or the total sum recoverable, as the case may be shall be deducted from any sum then due or which at any time thereafter may become due to the CONTRACTOR. The CONTRACTOR shall pay to the EMPLOYER on demand any balance remaining due.

29 FAILURE BY THE CONTRACTOR TO COMPLY WITH THE PROVISIONS OF THE CONTRACT:

29.1 If the CONTRACTOR refuses or fails to execute the WORK or any separate part thereof with such diligence as will ensure its completion within the time specified in the CONTRACT or extension thereof or fails to perform any of his obligation under the CONTRACT or in any manner commits a breach of any of the provisions of the CONTRACT it shall be open to the EMPLOYER at its option by written notice to the CONTRACTOR:

- a) TO DETERMINE THE CONTRACT in which event the CONTRACT shall stand terminated and shall cease to be in force and effect on and from the date appointed by the EMPLOYER on that behalf, whereupon the CONTRACTOR shall stop forthwith any of the CONTRACTOR's work then in progress, except such WORK as the EMPLOYER may, in writing, require to be done to safeguard any property or WORK, or installations from damage, and the EMPLOYER, for its part, may take over the work remaining unfinished by the CONTRACTOR and complete the same through a fresh contractor or by other means, at the risk and cost of the CONTRACTOR, and any of his sureties if any, shall be liable to the EMPLOYER for any excess cost occasioned by such work having to be so taken over and completed by the EMPLOYER over and above the cost at the rates specified in the schedule of quantities and rate/prices.
- b) WITHOUT DETERMINING THE CONTRACT to take over the work of the CONTRACTOR or any part thereof and complete the same through a fresh contractor or by other means at the risk and cost of the CONTRACTOR. The CONTRACTOR and any of his sureties are liable to the EMPLOYER for any excess cost over and above the cost at the rates specified in the Schedule of Quantities/ rates, occasioned by such works having been taken over and completed by the EMPLOYER.

29.2 In such events of Clause 29.1(a) or (b) above.

- a) The whole or part of the Contract Performance Security furnished by the CONTRACTOR is liable to be forfeited without prejudice to the right of the EMPLOYER to recover from the CONTRACTOR the excess cost referred to in the sub-clause aforesaid, the EMPLOYER shall also have the right of taking possession and utilising in completing the works or any part thereof, such as materials equipment and plants available at work site belonging to the CONTRACTOR as may be necessary and the CONTRACTOR shall not be entitled for any compensation for use or damage to such materials, equipment and plant.
- b) The amount that may have become due to the CONTRACTOR on account of work already executed by him shall not be payable to him until after the expiry of Six (6) calendar months reckoned from the date of termination of CONTRACT or from the taking over of the WORK or part thereof by the EMPLOYER as the case may be, during which period the responsibility for faulty materials or workmanship in respect of such work shall, under the CONTRACT, rest exclusively with the CONTRACTOR. This amount shall be subject to deduction of any amounts due from the CONTRACT to the EMPLOYER under the terms of the CONTRACT authorised or required to be reserved or retained by the EMPLOYER.

29.3 Before determining the CONTRACT as per Clause 29.1(a) or (b) provided in the judgement of the EMPLOYER, the default or defaults committed by the CONTRACTOR is/are curable and can be cured by the CONTRACTOR if an opportunity given to him, then the EMPLOYER may issue Notice in writing calling the CONTRACTOR to cure the default within such time specified in the Notice.

29.4 The EMPLOYER shall also have the right to proceed or take action as per 29.1(a) or (b) above, in the event that the CONTRACTOR becomes bankrupt, insolvent, compounds with his creditors, assigns the CONTRACT in favour of his creditors or any other person or persons, or being a company or a corporation goes into voluntary liquidation, provided that in the said events it shall not be necessary for the EMPLOYER to give any prior notice to the CONTRACTOR.

29.5 Termination of the CONTRACT as provided for in sub- clause 29.1(a) above shall not prejudice or affect their rights of the EMPLOYER which may have accrued upto the date of such termination.

30 CONTRACTOR REMAINS LIABLE TO PAY COMPENSATION IF:

30.1 In any case in which any of the powers conferred upon the EMPLOYER BY CLAUSE 29.0 thereof shall have become **action not taken under clause 29:** exercisable and the same had not been exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in .the event of any further case of default by the CONTRACTOR for which

by any clause or clauses hereof he is declared liable to pay compensation amounting to the whole of his Contract Performance Security, and the liability of the CONTRACTOR for past and future compensation shall remain unaffected. In the event of the EMPLOYER putting in force the power under above sub-clause (a), (b) or (c) vested in him under the preceding clause he may, if he so desired, take possession of all or any tools, and plants, materials and stores in or upon the works or the site thereof belonging to the CONTRACTOR or procured by him and intended to be used for the execution of the WORK or any part thereof paying or allowing for the same in account at the CONTRACT rates or in case of these not being applicable at current market rates to be certified by the ENGINEER-IN-CHARGE whose certificate thereof shall be final, otherwise the ENGINEER-IN-CHARGE may give notice in writing to the CONTRACTOR or his clerk of the works, foreman or other authorised agent, requiring him to remove such tools, plant, materials or stores from the premises (within a time to be specified in such notice), and in the event of the CONTRACTOR failing to comply with any such requisition, the ENGINEER-IN-CHARGE may remove them at the CONTRACTOR's expense or sell them by auction or private sale on account of the CONTRACTOR and at his risk in all respects without any further notice as to the date, time or place of sale and the certificate of the ENGINEER-IN-CHARGE as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the CONTRACTOR.

31 CHANGE IN CONSTITUTION:

- 31.1 Where the CONTRACTOR is a partnership firm, the prior approval of the EMPLOYER shall be obtained in writing, before any change is made in the constitution of the firm. Where the CONTRACTOR is an individual or a Hindu undivided family business concern, such approval as aforesaid shall, likewise be obtained before such CONTRACTOR enters into any agreement with other parties, where under, the reconstituted firm would have the right to carry out the work hereby undertaken by the CONTRACTOR. In either case if prior approval as aforesaid is not obtained, the CONTRACT shall be deemed to have been allotted in contravention of clause 37 hereof and the same action may be taken and the same consequence shall ensure as provided in the said clause.

32 TERMINATION OF CONTRACT:

- 32.1 **TERMINATION OF CONTRACT FOR DEATH:** If the CONTRACTOR is an individual or a proprietary concern and the individual or the proprietor dies or if the CONTRACTOR is a partnership concern and one of the partner dies then unless, the EMPLOYER is satisfied that the legal representative of the individual or the proprietary concern or the surviving partners are capable of carrying out and completing CONTRACT, he (the EMPLOYER) is entitled to cancel the CONTRACT for the uncompleted part without being in any way liable for any compensation payment to the estate of the deceased CONTRACTOR and/or to the surviving partners of the CONTRACTOR'S firm on account of the cancellation of CONTRACT. The decision of the EMPLOYER in such assessment shall be final and binding on the parties. In the event of such cancellation, the EMPLOYER shall not hold the estate of the deceased CONTRACTOR and/or the surviving partners of the CONTRACTOR'S firm liable for any damages for non-completion of CONTRACT.
- 32.2 **TERMINATION OF CONTRACT IN CASE OF LIQUIDATION / BANKRUPTCY ETC.** If the Contractor shall dissolve or become bankrupt or insolvent or cause or suffer any receiver to be appointed of his business of any assets thereof compound with his Creditors, or being a corporation commence to be wound up, not being a member's voluntary winding up for the purpose of amalgamation or reconstruction, or carry on its business under a Receiver for the benefits of its Creditors any of them, EMPLOYER shall be at liberty :- To terminate the contract forthwith upon coming to know of the happening of any such event as aforesaid by notice in writing to the Contractor or to give the Receiver or liquidator or other person, the option of carrying out the contract subject to his providing a guarantee upto an amount to be agreed upon by EMPLOYER for due and faithful performance of the contract.
- 32.3 **TERMINATION OF CONTRACT FOR NON-PERFORMANCE AND SUBSEQUENTLY PUTTING THE CONTRACTOR ON HOLIDAY:** In case of termination of CONTRACT herein set forth (under clause 29.0) except under conditions of Force Majeure and termination after expiry of contract, the CONTRACTOR shall be put under holiday [i.e. neither any enquiry will be issued to the party by BCPL. against any type of tender nor their offer will be considered by BCPL against any ongoing tender (s) where contract between GAIL and that particular

CONTRACTOR (as a bidder) has not been finalized] for three years from the date of termination by BCPL to such CONTRACTOR.

33 MEMBERS OF THE EMPLOYER NOT INDIVIDUALLY LIABLE :

- 33.1 No Director, or official or employee of the EMPLOYER/ CONSULTANT shall in any way be personally bound or liable for the acts or obligations of the EMPLOYER under the CONTRACT or answerable for any default or omission in the observance or performance of any of the acts, matters or things which are herein contained.

34 EMPLOYER NOT BOUND BY PERSONAL REPRESENTATIONS:

- 34.1 The CONTRACTOR shall not be entitled to any increase on the scheduled rates or any other right or claim whatsoever by reason of any representation, explanation statement or alleged representation, promise or guarantees given or alleged to have been given to him by any person.

35 CONTRACTOR'S OFFICE AT SITE:

- 35.1 The CONTRACTOR shall provide and maintain an office at the site for the accommodation of his agent and staff and such office shall be open at all reasonable hours to receive instructions, notice or other communications. The CONTRACTOR at all time shall maintain a site instruction book and compliance of these shall be communicated to the ENGINEER-IN CHARGE from time to time and the whole document to be preserved and handed over after completion of works.

36 CONTRACTOR'S SUBORDINATE STAFF AND THEIR CONDUCT

- 36.1 The CONTRACTOR, on or after award of the WORK shall name and depute a qualified engineer having sufficient experience in carrying out work of similar nature, to whom the equipments, materials, if any, shall be issued and instructions for works given. The CONTRACTOR shall also provide to the satisfaction of the ENGINEER-IN- CHARGE sufficient and qualified staff to superintend the execution of the WORK, competent sub-agents, foremen and leading hands including those specially qualified by previous experience to supervise the types of works comprised in the CONTRACT in such manner as will ensure work of the best quality, expeditious working. Whenever in the opinion of the ENGINEER-IN- CHARGE additional properly qualified supervisory staff is considered necessary, they shall be employed by the CONTRACTOR without additional charge on accounts thereof. The CONTRACTOR shall ensure to the satisfaction of the ENGINEER-IN-CHARGE that SUB- CONTRACTORS, if any, shall provide competent and efficient supervision, over the work entrusted to them.
- 36.2 If and whenever any of the CONTRACTOR's or SUB- CONTRACTOR'S agents, sub-agents, assistants, foremen, or other employees shall in the opinion of ENGINEER-IN- CHARGE be guilty of any misconduct or be incompetent or insufficiently qualified or negligent in the performance of their duties of that in the opinion of the EMPLOYER or the ENGINEER-IN-CHARGE, it is undesirable for administrative or any other reason for such person or persons to be employed in the works, the CONTRACTOR, is so directed by the ENGINEER-IN-CHARGE, shall at once remove such person or persons from employment thereon. Any person or persons so removed from the works shall not again be employed in connection with the WORKS without the written permission of the ENGINEER-IN- CHARGE. Any person so removed from the WORK shall be immediately re-placed at the expense of the CONTRACTOR by a qualified and competent substitute. Should the CONTRACTOR be requested to repatriate any person removed from the works he shall do so and shall bear all costs in connection herewith.
- 36.3 The CONTRACTOR shall be responsible for the proper behaviour of all the staff, foremen, workmen, and others, and shall exercise a proper degree of control over them and in particular and without prejudice to the said generality, the CONTRACTOR shall be bound to prohibit and prevent any employees from trespassing or acting in any way detrimental or prejudicial to the interest of the community or of the properties or occupiers of land and properties in the neighborhood and in the event of such employee so trespassing, the CONTRACTOR shall be responsible therefore and relieve the EMPLOYER of all consequent claims or actions for damages or injury or any other grounds whatsoever. The decision of the ENGINEER-IN-CHARGE upon any matter arising under this clause shall be final. The CONTRACTOR shall be liable for any liability to EMPLOYER on account of deployment of CONTRACTOR's staff etc. or incidental or arising out of the execution of CONTRACT. The CONTRACTOR shall be liable for all acts or omissions on the part of

his staff, Foremen and Workmen and others in his employment, including misfeasance or negligence of whatever kind in the course of their work or during their employment, which are connected directly or indirectly with the CONTRACT.

- 36.4 If and when required by the EMPLOYER and CONTRACTOR's personnel entering upon the EMPLOYER's premises shall be properly identified by badges of a type acceptable to the EMPLOYER which must be worn at all times on EMPLOYER's premises. CONTRACTOR may be required to obtain daily entry passes for his staff/employees from EMPLOYER to work within operating areas. These being safety requirements, no relaxations on this account shall be given to CONTRACTOR.

37 SUB-LETTING OF WORKS:

- 37.1 No part of the CONTRACT nor any share or interest therein shall in any manner or degree be transferred, assigned or sublet by the CONTRACTOR directly or indirectly to any person, firm or corporation whatsoever without the consent in writing, of the ENGINEER/EMPLOYER except as provided for in the succeeding sub-clause.
- i) SUB-CONTRACTS FOR TEMPORARY WORKS ETC.: The EMPLOYER may give written consent to Sub-contract for the execution of any part of the WORK at the site, being entered in to by CONTRACTOR provided each individual Sub- contract is submitted to the ENGINEER-IN-CHARGE before being entered into and is approved by him.
 - ii) LIST OF SUB-CONTRACTORS TO BE SUPPLIED: At the commencement of every month the CONTRACTOR shall furnish to the ENGINEER-IN- CHARGE list of all SUB-CONTRACTORS or other persons or firms engaged by the CONTRACTOR and working at the SITE during the previous month with particulars of the general nature of the Subcontract or works done by them.
 - iii) CONTRACTOR'S LIABILITY NOT LIMITED BY SUB- CONTRACTORS: Notwithstanding any sub-letting with such approval as aforesaid and notwithstanding that the ENGINEER-I N-CHARGE shall have received copies of any Subcontracts, the contractor shall be and shall remain solely responsible for the quality, proper and expeditious execution of the Contract in all respects as if such sub-letting or Subcontracting had not taken place, and as if such work had been done directly by the CONTRACTOR. The CONTRACTOR shall bear all responsibility for any act or omission on the part of sub-contractors in regard to work to be performed under the CONTRACT.
 - iv) EMPLOYER MAY TERMINATE SUB-CONTRACTS: If any SUB-CONTRACTOR engaged upon the works at the site executes any works which in the opinion of the ENGINEER-IN-CHARGE is not in accordance with the CONTRACT documents, the EMPLOYER may by written notice to the CONTRACTOR request him to terminate such subcontract and the CONTRACTOR upon the receipt of such notice shall terminate such Subcontract and dismiss the SUB-CONTRACTOR(S) and the later shall forthwith leave the works, failing which the EMPLOYER shall have the right to remove such SUB- CONTRACTOR(S) from the site.
 - v) NO REMEDY FOR ACTION TAKEN UNDER THIS CLAUSE: No action taken by the EMPLOYER under the clause shall relieve the CONTRACTOR of any of his liabilities under the CONTRACT or give rise to any right or compensation, extension of time or otherwise failing which the EMPLOYER shall have the right to remove such SUB-CONTRACTOR(S) from the site.

38 POWER OF ENTRY:

- 38.1 If the CONTRACTOR shall not commence the WORK in the manner previously described in the CONTRACT documents or if he shall at any time in the opinion of the ENGINEER-I N-CHARGE.
- i) fail to carry out the WORK in conformity with the CONTRACT documents, or
 - ii) fail to carry out the WORK in accordance with the Time Schedule, or
 - iii) substantially suspend work or the WORK for a period of fourteen days without authority from the ENGINEER IN-CHARGE, or
 - iv) fail to carry out and execute the WORK to the satisfaction of the ENGINEER-IN-CHARGE, or
 - v) fail to supply sufficient or suitable construction plant, temporary works, labour, materials or things, or
 - vi) Commit, suffer, or permit any other breach of any of the provisions of the CONTRACT on his part to be performed or observed or persist in any of the above mentioned breaches of the CONTRACT for fourteen days, after notice in writing shall have been given to the CONTRACTOR by the ENGINEER-IN-CHARGE requiring such breach to be remedied, or
 - vi) if the CONTRACTOR shall abandon the WORK , or

vii) If the CONTRACTOR during the continuance of the CONTRACT shall become bankrupt, make any arrangement or composition with his creditors, or permit any execution to be levied or go into liquidation whether compulsory or voluntary not being merely a voluntary liquidation for the purpose of amalgamation or reconstruction then in any such case, the EMPLOYER shall have the power to enter upon the WORK and take possession thereof and of the materials, temporary WORK, construction plant, and stock thereon, and to revoke the CONTRACTOR's licence to use the same, and to complete the WORK by his agents, other CONTRACTORS or workmen or to relate the same upon any terms and to such other person, firm or corporation as the EMPLOYER in his absolute discretion may think proper to employ and for the purpose aforesaid to use or authorise the use of any materials, temporary work, CONSTRUCTION PLANT, and stock as aforesaid, without making payment or allowance to the CONTRACTOR for the said materials other than such as may be certified in writing by the ENGINEER-IN-CHARGE to be reasonable, and without making any payment or allowance to the CONTRACTOR for the use of the temporary said works, construction plant and stock or being liable for any loss or damage thereto, and if the EMPLOYER shall by reason of his taking possession of the WORK or of the WORK being completed by other CONTRACTOR (due account being taken of any such extra work or works which may or be omitted) then the amount of such excess as certified by the ENGINEER-IN-CHARGE shall be deducted from any money which may be due for work done by the CONTRACTOR under the CONTRACT and not paid for. Any deficiency shall forthwith be made good and paid to the EMPLOYER by the CONTRACTOR and the EMPLOYER shall have power to sell in such manner and for such price as he may think fit all or any of the construction plant, materials etc. constructed by or belonging to and to recoup and retain the said deficiency or any part thereof out of proceeds of the sale.

39 CONTRACTOR'S RESPONSIBILITY WITH THE MECHANICAL, ELECTRICAL, INTERCOMMUNICATION SYSTEM, AIR CONDITIONING CONTRACTORS AND OTHER AGENCIES:

39.1 Without repugnance of any other condition, it shall be the responsibility of the CONTRACTOR executing the work of civil construction, to work in close cooperation and coordinate the WORK with the Mechanical, Electrical, Air-conditioning and Intercommunication Contractor's and other agencies or their authorised representatives, in providing the necessary grooves, recesses, cuts and opening etc., in wall, slabs beams and columns etc. and making good the same to the desired finish as per specification, for the placement of electrical, intercommunication cables, conduits, air-conditioning inlets and outlets grills and other equipments etc. where required. For the above said requirements in the false ceiling and other partitions, the CONTRACTOR before starting-up the work shall in consultation with the Electrical, Mechanical, Intercommunication, Air-conditioning contractor and other agencies prepare and put-up a joint scheme, showing the necessary openings, grooves, recesses, cuts, the methods of fixing required for the WORK of the aforesaid, and the finishes therein, to the ENGINEER-IN-CHARGE and get the approval. The CONTRACTOR before finally submitting the scheme to the ENGINEER-IN-CHARGE, shall have the written agreement of the other agencies. The ENGINEER-IN-CHARGE, before communicating his approval to the scheme, with any required modification, shall get the final agreement of all the agencies, which shall be binding. No claim shall be entertained on account of the above. The CONTRACTOR shall confirm in all respects with provision of any statutory regulations, ordinances or byelaws of any local or duly constituted authorities or public bodies which may be applicable from time to time to the WORK or any temporary works. The CONTRACTOR shall keep the EMPLOYER indemnified against all penalties and liabilities of every kind, arising out of non-adherence to such stains, ordinances, laws, rules, regulations, etc.

40 OTHER AGENCIES AT SITE:

40.1 The CONTRACTOR shall have to execute the WORK in such place and conditions where other agencies will also be engaged for other works such as site grading, filling, and levelling, electrical and mechanical engineering works, etc. No claim shall be entertained due to WORK being executed in the above circumstances.

41 NOTICE:

- 41.1 TO THE CONTRACTOR: Any notice hereunder may be served on the CONTRACTOR or his duly authorised representative at the job site or may be served by registered mail direct to the address furnished by the CONTRACTOR. Proof of issue of any such notice could be conclusive of the CONTRACTOR having been duly informed of all contents therein.
- 41.2 TO THE EMPLOYER: Any notice to be given to the EMPLOYER under the terms of the CONTRACTOR shall be served by sending the same by Registered mail to or delivering the same at the respective site offices of M/S. BRAHMAPUTRA CRACKERS & POLYMERS LTD. addressed to the HEAD/SITE-IN-CHARGE.

42 RIGHT OF VARIOUS INTERESTS:

- 42.1 The EMPLOYER reserves the right to distribute the work between more than one agency(ies). The CONTRACTOR shall cooperate and afford other agency(ies) reasonable opportunity for access to the WORK for the carriage and storage of materials and execution of their works.
- 42.2 Wherever the work being done by any department of the EMPLOYER or by other agency(ies) employed by the EMPLOYER is contingent upon WORK covered by this CONTRACT, the respective rights of the various interests involved shall be determined by the ENGINEER-IN-CHARGE to secure the completion of the various portions of the work in general harmony.

43 PATENTS AND ROYALTIES:

- 43.1 The CONTRACTOR, if licensed under any patent covering equipment, machinery, materials or compositions of matter to be used or supplied or methods and process to be practised or employed in the performance of this CONTRACT, agrees to pay all royalties and licence fees which may be due with respect thereto. If any equipment, machinery, materials, composition of matters, be used or supplied or methods and processes to be practised or employed in the performance of this CONTRACT, is covered by a patent under which the CONTRACTOR is not licensed then the CONTRACTOR before supplying or using the equipment, machinery materials, composition method or processes shall obtain such licences and pay such royalties and licence fees as may be necessary for performance of this CONTRACT. In the event the CONTRACTOR fails to pay any such royalty or obtain any such licence, any suit for infringement of such patents which is brought against the CONTRACTOR or the EMPLOYER as a result such failure will be defended by the CONTRACTOR at his own expense and the CONTRACTOR will pay any damages and costs awarded in such suit. The CONTRACTOR shall promptly notify the EMPLOYER if the CONTRACTOR has acquired the knowledge of any plant under which a suit for infringement could be reasonably brought because of the use by the EMPLOYER of any equipment, machinery, materials, process, methods to be supplied hereunder. The CONTRACTOR agrees to and does hereby grant to EMPLOYER, together with the right to extend the same to any of the subsidiaries of the EMPLOYER as irrevocable, royalty free licence to use in any country, any invention made by the CONTRACTOR or his employee in or as result of the performance of the WORK under the CONTRACT.
- 43.2 All charges on account of royalty. tollage, rent, octroi terminal or sales tax and/or other duties or any other levy on materials obtained for the work or temporary work or part thereof (excluding materials provided by the EMPLOYER) shall be borne by the CONTRACTOR.
- 43.3 The CONTRACTOR shall not sell or otherwise dispose of or remove except for the purpose of this CONTRACT, the sand, stone, clay, ballast, earth, rock or other substances, or materials obtained from any excavation made for the purpose of the WORK or any building or produce upon the site at the time of delivery of the possession thereof, but all such substances, materials, buildings and produce shall be the property of the EMPLOYER provided that the CONTRACTOR may with the permission of the ENGINEER-IN-CHARGE, use the same for the purpose of the work by payment of cost of the same at such a rate as may be determined by the ENGINEER-IN-CHARGE.
- 43.4 The EMPLOYER shall indemnify and save harmless the CONTRACTOR from any loss on account of claims against CONTRACTOR for the contributory infringement of patent rights arising out and based upon the claim that the use of the EMPLOYER of the process included in the design prepared by the EMPLOYER and used in the operation of the plant infringes on any patent right. With respect to any subcontract entered into by CONTRACTOR pursuant to the provisions of the relevant clause hereof, the CONTRACTOR shall obtain from the SUB-CONTRACTOR an undertaking to provide the EMPLOYER with the same patent protection that CONTRACTOR is required to provide under the provisions of this clause.

44 LIENS:

- 44.1 If, at any time there should be evidence or any lien or claim for which the EMPLOYER might have become liable and which is chargeable to the CONTRACTOR, the EMPLOYER shall have the right to retain out of any payment then due or thereafter to become due an amount sufficient to completely indemnify the EMPLOYER against such lien or claim and if such lien or claim be valid, the EMPLOYER may pay and discharge the same and deduct the amount so paid from any money which may be or may become due and payable to the CONTRACTOR. If any lien or claim remain unsettled after all payments are made, the CONTRACTOR shall refund or pay to the EMPLOYER all money that the latter may be compelled to pay in discharging such lien or claim including all costs and reasonable expenses. EMPLOYER reserves the right to do the same.
- 44.2 The EMPLOYER shall have lien on all materials, equipments including those brought by the CONTRACTOR for the purpose of erection, testing and commissioning of the WORK.
- 44.3 The final payment shall not become due until the CONTRACTOR delivers to the ENGINEER-IN-CHARGE a complete release or waiver of all liens arising or which may arise out of his agreement or receipt in full or certification by the CONTRACTOR in a form approved by ENGINEER-IN-CHARGE that all invoices for labour, materials, services have been paid in lien thereof and if required by the ENGINEER-IN-CHARGE in any case an affidavit that so far as the CONTRACTOR has knowledge or information the releases and receipts include all the labour and material for which a lien could be filled.
- 44.4 CONTRACTOR will indemnify and hold the EMPLOYER harmless, for a period of two years after the issue of FINAL CERTIFICATE, from all liens and other encumbrances against the EMPLOYER on account of debts or claims alleged to be due from the CONTRACTOR or his SUB-CONTRACTOR to any person including SUB- CONTRACTOR and on behalf of EMPLOYER will defend at his own expense, any claim or litigation brought against the EMPLOYER or the CONTRACTOR in connection therewith. CONTRACTOR shall defend or contest at his own expense any fresh claim or litigation by any person including his SUB-CONTRACTOR, till its satisfactory settlement even after the expiry of two years from the date of issue of FINAL CERTIFICATE.

45 DELAYS BY EMPLOYER OR HIS AUTHORISED AGENTS:

- 45.1 In case the CONTRACTOR's performance is delayed due to any act or omission on the part of the EMPLOYER or his authorized agents, then the CONTRACTOR shall be given due extension of time for the completion of the WORK, to the extent such omission on the part of the EMPLOYER has caused delay in the CONTRACTOR's performance of his WORK.
- 45.2 No adjustment in CONTRACT PRICE shall be allowed for reasons of such delays and extensions granted except as provided in TENDER DOCUMENT, where the EMPLOYER reserves the right to seek indulgence of CONTRACTOR to maintain the agreed Time Schedule of Completion. In such an event the CONTRACTOR shall be obliged for working by CONTRACTOR's personnel for additional time beyond stipulated working hours as also Sundays and Holidays and achieve the completion date/interim targets.

46 PAYMENT IF THE CONTRACT IS TERMINATED:

- 46.1 If the CONTRACT shall be terminated as per Tender pursuant to Clause no. 29 of GCC, the CONTRACTOR shall be paid by the EMPLOYER in so far as such amounts or items shall not have already been covered by payments of amounts made to the CONTRACTOR for the WORK executed and accepted by ENGINEER-IN-CHARGE prior to the date of termination at the rates and prices provided for in the CONTRACT and in addition to the following:
- i) The amount payable in respect of any preliminary items, so far as the Work or service comprised therein has been carried out or performed and an appropriate portion as certified by ENGINEER-IN-CHARGE of any such items or service comprised in which has been partially carried out or performed.
 - ii) Any other expenses which the CONTRACTOR has expended for performing the WORK under the CONTRACT subject to being duly recommended by ENGINEER-IN-CHARGE and approved by EMPLOYER for payment, based on documentary evidence of his having incurred such expenses.
- 46.2 The CONTRACTOR will be further required to transfer the title and provide the following in the manner and as directed by the EMPLOYER.
- a) Any and all completed works.

- b) Such partially completed WORK including drawings, informations and CONTRACT rights as the CONTRACTOR has specially performed, produced or acquired for the performance of the CONTRACTOR.

47 NO WAIVER OF RIGHTS:

- 47.1 Neither the inspection by the EMPLOYER or any of their officials, employees, or agents nor any order by the EMPLOYER for payment of money or any payment for or acceptance of the whole or any part of the Work by the EMPLOYER nor any extension of time, nor any possession taken by EMPLOYER shall operate as a waiver of any provision of the CONTRACT, or of any power herein reserved to the EMPLOYER, or any right to damages herein provided, nor shall any waiver of any breach in the CONTRACT be held to be a waiver of any other subsequent breach.

48 CERTIFICATE NOT TO AFFECT RIGHT OF EMPLOYER AND LIABILITY OF CONTRACTOR:

- 48.1 No interim payment certificate(s) issued by the Engineer-in- Charge of the EMPLOYER, nor any sum paid on account by the EMPLOYER, nor any extension of time for execution of the work granted by EMPLOYER shall affect or prejudice the rights of the Employer against the CONTRACTOR or relieve the CONTRACTOR of his obligations for the due performance of the CONTRACT, or be interpreted as approval of the WORK done or of the equipment supplied and no certificate shall create liability for the EMPLOYER to pay for alterations, amendments, variations or additional works not ordered, in writing, by EMPLOYER or discharge the liability of the CONTRACTOR for the payment of damages whether due, ascertained, or certified or not or any sum against the payment of which he is bound to indemnify the EMPLOYER.

49 LANGUAGE AND MEASURES:

- 49.1 All documents pertaining to the CONTRACT including Specifications, Schedules, Notices, Correspondence, operating and maintenance Instructions, DRAWINGS, or any other writing shall be written in English language. The Metric System of measurement shall be used in the CONTRACT unless otherwise specified.

50 TRANSFER OF TITLE:

- 50.1 The title of Ownership of supplies furnished by the CONTRACTOR shall not pass on to the EMPLOYER for all Supplies till the same are finally accepted by the EMPLOYER after the successful completion of PERFORMANCE TEST and GUARANTEE TEST and issue of FINAL CERTIFICATE.
- 50.2 However, the EMPLOYER shall have the lien on all such works performed as soon as any advance or progressive payment is made by the EMPLOYER to the CONTRACTOR and the CONTRACTOR shall not subject these works for use other than those intended under this CONTRACT.

51 RELEASE OF INFORMATION:

- 51.1 The CONTRACTOR shall not communicate or use in advertising, publicity, sales releases or in any other medium, photographs, or other reproduction of the Work under this CONTRACT or description of the site dimensions, quantity , quality or other information, concerning the Work unless prior written permission has been obtained from the EMPLOYER.

52 BRAND NAMES:

- 52.1 The specific reference in the SPECIFICATIONS and documents to any material by trade name, make or catalogue number shall be construed as establishing standard or quality and performance and not as limited competition. However, TENDERER may offer other similar equipments provided it meets the specified standard design and performance requirements.

53 COMPLETION OF CONTRACT:

- 53.1 Unless otherwise terminated under the provisions of any other relevant clause, this CONTRACT shall be deemed to have been completed at the expiration of the PERIOD OF LIABILITY as provided for under the CONTRACT.

54 SPARES:

- 54.1 The CONTRACTOR shall furnish to the EMPLOYER all spares required for COMMISSIONING of the plants, recommendatory and/or mandatory spares, which are required essential by the manufacturer/supplier. The same shall be delivered at SITE, 3(Three) months before COMMISSIONING. Also the CONTRACTOR should furnish the manufacturing drawings for fast wearing spares.
- 54.2 The CONTRACTOR guarantees the EMPLOYER that before the manufacturers of the equipments, plants and machineries go out of production of spare parts for the equipment furnished and erected by him, he shall give at least twelve (12) months' advance notice to the EMPLOYER, so that the latter may order his requirement of spares in one lot, if he so desires.

SECTION-V PERFORMANCE OF WORK

55 EXECUTION OF WORK:

- 55.1 All the Works shall be executed in strict conformity with the provisions of the CONTRACT Documents and with such explanatory detailed drawings, specification and instructions as may be furnished from time to time to the CONTRACTOR by the ENGINEER-IN-CHARGE whether mentioned in the CONTRACT or not. The CONTRACTOR shall be responsible for ensuring that works throughout are executed in the most substantial, proper and workmanlike manner with the quality of material and workmanship in strict accordance with the SPECIFICATIONS and to the entire satisfaction of the ENGINEER-IN-CHARGE. The CONTRACTOR shall provide all necessary materials equipment labour etc. for execution and maintenance of WORK till completion unless otherwise mentioned in the CONTRACT.

56 CO-ORDINATION AND INSPECTION OF WORK:

- 56.1 The coordination and inspection of the day-to-day work under the CONTRACT shall be the responsibility of the ENGINEER-IN-CHARGE. The written instruction regarding any particular job will normally be passed by the ENGINEER-IN-CHARGE or his authorised representative. A work order book will be maintained by the CONTRACTOR for each sector in which the aforesaid written instructions will be entered. These will be signed by the CONTRACTOR or his authorised representative by way of acknowledgement within 12 hours.

57 WORK IN MONSOON AND DEWATERING:

- 57.1 Unless otherwise specified elsewhere in the tender, the execution of the WORK may entail working in the monsoon also. The CONTRACTOR must maintain a minimum labour force as may be required for the job and plan and execute the construction and erection according to the prescribed schedule. No extra rate will be considered for such work in monsoon.
- 57.2 During monsoon and other period, it shall be the responsibility of the CONTRACTOR to keep the construction work site free from water at his own cost.

58 WORK ON SUNDAYS AND HOLIDAYS:

- 58.1 For carrying out Work on Sundays, and Holidays, the CONTRACTOR will approach the ENGINEER-IN-CHARGE or his representative at least two days in advance and obtain permission in writing. The CONTRACTOR shall observe all labour laws and other statutory rules and regulations in force. In case of any violations of such laws, rules and regulations, consequence if any, including the cost thereto shall be exclusively borne by the CONTRACTOR and the EMPLOYER shall have no liability whatsoever on this account.

59 GENERAL CONDITIONS FOR CONSTRUCTION AND ERECTION WORK:

- 59.1 The working time at the site of work is 48 hours per week. Overtime work is permitted in cases of need and the EMPLOYER will not compensate the same. Shift working at 2 or 3 shifts per day will become necessary and the CONTRACTOR should take this aspect into consideration for formulating his rates for quotation. No extra claims will be entertained by the EMPLOYER on this account. For carrying out work beyond working hours the CONTRACTOR will approach the ENGINEER-IN-CHARGE or his authorized representative and obtain his prior written permission.

- 59.2 The CONTRACTOR must arrange for the placement of workers in such a way that the delayed completion of the WORK or any part thereof for any reason whatsoever will not affect their proper employment. The EMPLOYER will not entertain any claim for idle time payment whatsoever.
- 59.3 The CONTRACTOR shall submit to the EMPLOYER/ENGINEER-IN- CHARGE reports at regular intervals regarding the state and progress of WORK. The details and proforma of the report will mutually be agreed after the award of CONTRACT. The CONTRACTOR shall provide display boards showing progress and labour strengths at worksite, as directed by the ENGINEER-IN-CHARGE.

60 ALTERATIONS IN SPECIFICATIONS, DESIGN AND EXTRA WORKS:

- 60.1 The WORK covered under this CONTRACT having to be executed by the CONTRACTOR on a lumpsum firm price/item rate quoted by him, the EMPLOYER will not accept any proposals for changes in VALUE OF CONTRACT or extension in time on account of any such changes which may arise to the CONTRACTOR's scope of WORK as a result of detailed Engineering and thereafter during the execution of WORK. The only exception to this will be a case where the EMPLOYER requests in writing to the CONTRACTOR to upgrade the SPECIFICATIONS or the size of any major pieces of equipments, plant or machinery beyond what is normally required to meet the scope of WORK as defined in the CONTRACT DOCUMENT. In such cases, a change order will be initialled by the CONTRACTOR at the appropriate time for the EMPLOYER's prior approval giving the full back-up data for their review and for final settlement of any impact on price within 30 (thirty) days thereafter.
- 60.2 The ENGINEER-IN-CHARGE shall have to make any alterations in, omission from, additions to or substitutions for, the Schedule of Rates, the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the WORK and the CONTRACTOR shall be bound to carry out the such altered/ extra/ new items of WORK in accordance with any instructions which may be given to him in writing signed by the ENGINEER-IN- CHARGE, and such alterations, omissions, additions or substitutions shall not invalidate the CONTRACT and any altered, additional or substituted work which the CONTRACTOR may be directed to do in the manner above specified as part of the WORK shall be carried out by the CONTRACTOR on the same conditions in all respects on which he agreed to do the main WORK. The time of completion of WORK may be extended for the part of the particular job at the discretion of the ENGINEER-IN- CHARGE, for only such alterations, additions or substitutions of the WORK, as he may consider as just and reasonable. The rates for such additional, altered or substituted WORK under this clause shall be worked out in accordance with the following provisions:-
- I. For Item Rate Contract
- a) If the rates for the additional, altered or substituted WORK are specified in the CONTRACT for the WORK, the CONTRACTOR is bound to carry on the additional, altered or substituted WORK at the same rates as are specified in the CONTRACT.
 - b) If the rates for the additional, altered or substituted WORK are not specifically provided in the CONTRACT for the WORK, the rates will be derived from the rates for similar class of WORK as are specified in the CONTRACT for the WORK. The opinion of the ENGINEER-IN- CHARGE, as to whether or not the rates can be reasonably so derived from the items in this CONTRACT will be final and binding on the CONTRACTOR.
 - c) If the rates for the altered, additional or substituted WORK cannot be determined in the manner specified in sub-clause(s) and (b) above, then the CONTRACTOR shall, within 7 days of the date of receipt of order to carry out the WORK, inform the ENGINEER-IN-CHARGE of the rates which it is his intention to charge for such class of WORK, supported by analysis of the rate or rates claimed, and the ENGINEER-IN-CHARGE shall determine the rate or rates on the basis of the prevailing market rates, labour cost at schedule of labour rates plus 10% to cover contractor's supervision, overheads and profit and pay the CONTRACTOR accordingly. The opinion of the ENGINEER- IN-CHARGE as to current market rates of materials and the quantum of labour involved per unit of measurement will be final and binding on the CONTRACTOR.
 - d) Where the item of work will be executed through nominated specialist agency as approved by the ENGINEER-IN-CHARGE, then the actual amount paid to such nominated agency supported by documentary evidence and as certified by ENGINEER-IN-CHARGE shall be considered plus 10% (ten percent) to cover all contingencies, overhead, profits to arrive at the rates.

- e) Provisions contained in the Sub-clause (a) & (d) above shall, however, not apply for the following:- Where the value of additions of new items together with the value of alterations, additions/deletions or substitutions does not exceed by or is not less than plus/minus ($\pm$)25% of the VALUE OF CONTRACT. The item rates in the Schedule of Rates shall hold good for all such variations between the above mentioned limits, irrespective of any increase/decrease of quantities in the individual items of Schedule of Rates. Where the value of addition of new items together with the value of alterations, additions/deletions or substitutions reduces more than 25% of the contract value but is within the following limits the tenderer shall be paid compensation for decrease in the value of work, as follows: S.No. Range of Variation Percentage compensation for decrease in the value of work in the respective range. a) Beyond (+) 25% No increase and/or upto & inclusive of decrease shall be (+) 50% applicable for the Schedule of Rates (The rates quoted for this increase shall be valid). b) Beyond (-) 25% upto & For reduction beyond inclusive of (-) 50% 25%contractor shall be compensated by an amount equivalent to 10% of the reduction in value of the contract as awarded. For example if the actual contract value is 70% of awarded value then compensation shall be 10% of (75-70) i.e. 0.5% of awarded contract value.

- II. For Lumpsum Contracts: CONTRACTOR shall, within 7 days of the date of receipt of order to carry out the WORK, inform the ENGINEER-IN- CHARGE of the rates which it is his intention to charge for such class of WORK, supported by analysis of the rate or rates claimed, and the ENGINEER-IN-CHARGE shall determine the rate or rates on the basis of the prevailing market rates, labour cost at schedule of labour rates plus 10% to cover contractor's supervision, overheads and profit and pay the CONTRACTOR accordingly. The opinion of the ENGINEER- IN-CHARGE as to current market rates of materials and the quantum of labour involved per unit of measurement will be final and binding on the CONTRACTOR.

61 DRAWINGS TO BE SUPPLIED BY THE EMPLOYER

- 61.1 The drawings attached with tender are only for the general guidance to the CONTRACTOR to enable him to visualize the type of work contemplated and scope of work involved. The CONTRACTOR will be deemed to have studied the DRAWINGS and formed an idea about the WORK involved.
- 61.2 Detailed working drawings on the basis of which actual execution of the WORK is to proceed, will be furnished from time to time during the progress of the work. The CONTRACTOR shall be deemed to have gone through the DRAWINGS supplied to him thoroughly and carefully and in conjunction with all other connected drawings and bring to the notice of the ENGINEER-IN-CHARGE discrepancies, if any, therein before actually carrying out the Work.
- 61.3 Copies of all detailed working drawings relating to the WORK shall be kept at the CONTRACTOR's office on the site and shall be made available to the ENGINEER-IN- CHARGE at any time during the CONTRACT. The drawings and other documents issued by the EMPLOYER shall be returned to the EMPLOYER on completion of the WORK.

62 DRAWINGS TO BE SUPPLIED BY THE CONTRACTOR:

- 62.1 The drawings/date which are to be furnished by the CONTRACTOR are enumerated in the special conditions of contract, and shall be furnished within the specified time.
- 62.2 Where approval/review of drawings before manufacture/ construction/fabrication has been specified, it shall be CONTRACTOR's responsibility to have these drawings prepared as per the directions of ENGINEER-IN-CHARGE and got approved before proceeding with manufacture/construction/fabrication as the case may be. Any change that may have become necessary in these drawings during the execution of the work shall have to be carried out by the CONTRACTOR to the satisfaction of ENGINEER-IN-CHARGE at no extra cost. All final drawings shall bear the certification stamp as indicated below duly signed by both the CONTRACTOR and ENGINEER-IN-CHARGE. "Certified true for _____ (Name of Work) Agreement No. _____ Signed: _____ (CONTRACTOR) (ENGINEER-IN-CHARGE)
- 62.3 The DRAWINGS submitted by the CONTRACTOR shall be reviewed by the ENGINEER-IN-CHARGE as far as practicable within 3 (Three) weeks and shall be modified by the CONTRACTOR, if any modifications and/or corrections are required by the ENGINEER-IN-CHARGE. The CONTRACTOR shall incorporate such modifications and/or corrections and submit the final drawings for approval. Any delays arising out of

failure by the CONTRACTOR to rectify the drawing in good time shall not alter the Contract Completion Time.

- 62.4 As built drawings showing all corrections, adjustments etc. shall be furnished by the CONTRACTOR in six copies and one transparent for record purposed to the EMPLOYER.

63 SETTING OUT WORKS:

- 63.1 The ENGINEER-IN-CHARGE shall furnish the CONTRACTOR with only the four corners of the Works site and a level bench mark and the CONTRACTOR shall set out the Works and shall provide an efficient staff for the purpose and shall be solely responsible for the accuracy of such setting out.
- 63.2 The CONTRACTOR shall provide, fix and be responsible for the maintenance of all stakes, templates, level marks, profiles and other similar things and shall take all necessary precautions to prevent their removal or disturbance and shall be responsible for the consequence of such removal or disturbance should the same take place and for their efficient and timely reinstatement. The CONTRACTOR shall also be responsible for the maintenance of all existing survey marks, boundary marks, distance marks and center line marks, either existing or supplied and fixed by the CONTRACTOR. The work shall be set out to the satisfaction of the ENGINEER-IN-CHARGE. The approval there of joining with the CONTRACTOR by the ENGINEER- IN-CHARGE in setting out the work, shall not relieve the CONTRACTOR of any of his responsibility.
- 63.3 Before beginning the Works, the CONTRACTOR shall at his own cost, provide all necessary reference and level posts, pegs, bamboos, flags, ranging rods, strings and other materials for proper layout of the works in accordance with the schemes for bearing marks acceptable to the ENGINEER-IN-CHARGE. The center, longitudinal or face lines and cross lines shall be marked by means of small masonry pillars. Each pillar shall have distinct mark at the centre to enable theodolite to be set over it. No work shall be started until all these points are checked and approved by the ENGINEER-IN-CHARGE in writing but such approval shall not relieve the CONTRACTOR of any of his responsibilities. The CONTRACTOR shall also provide all labour, material and other facilities, as necessary, for the proper checking of layout and inspection of the points during construction.
- 63.4 Pillars bearing geodetic marks located at the sites of units of WORKS under construction should be protected and fenced by the CONTRACTOR.
- 63.5 On completion of WORK, the CONTRACTOR must submit the geodetic documents according to which the WORK was carried out.

64 RESPONSIBILITY FOR LEVEL AND ALIGNMENT:

- 64.1 The CONTRACTOR shall be entirely and exclusively responsible for the horizontal and vertical alignment, the levels and correctness of every part of the WORK and shall rectify effectively any errors or imperfections therein, such rectifications shall be carried out by the CONTRACTOR, at his own cost, when instructions are issued to that effect by the ENGINEER- IN-CHARGE.

65 MATERIALS TO BE SUPPLIED BY CONTRACTOR:

- 65.1 The CONTRACTOR shall procure and provide within the VALUE OF CONTRACT the whole of the materials required for the construction including steels, cement and other building materials, tools, tackles, construction plant and equipment for the completion and maintenance of the WORK except the materials which will be issued by the EMPLOYER and shall make his own arrangement for procuring such materials and for the transport thereof. The EMPLOYER may give necessary recommendation to the respective authority if so desired by the CONTRACTOR but assumes no further responsibility of any nature. The EMPLOYER will insist on the procurement of materials which bear ISI stamp and/or which are supplied by reputed suppliers.
- 65.2 The CONTRACTOR shall properly store all materials either issued to him or brought by him to the SITE to prevent damages due to rain, wind, direct exposure to sun, etc. as also from theft, pilferage, etc. for proper and speedy execution of his works. The CONTRACTOR shall maintain sufficient stocks of all materials required by him.
- 65.3 No material shall be despatched from the CONTRACTOR's stores before obtaining the approval in writing of the ENGINEER-IN-CHARGE.

66 STORES SUPPLIED BY THE EMPLOYER:

- 66.1 If the SPECIFICATION of the WORK provides for the use of any material of special description to be supplied from the EMPLOYER's stores or it is required that the CONTRACTOR shall use certain stores to be provided by the ENGINEER-IN-CHARGE, such materials and stores, and price to be charged there for as hereinafter mentioned being so far as practicable for the convenience of the CONTRACTOR, but not so as in any way to control the meaning or effect of the CONTRACT, the CONTRACTOR shall be bound to purchase and shall be supplied such materials and stores as are from time to time required to be used by him for the purpose of the CONTRACT only. The sums due from the CONTRACTOR for the value of materials supplied by the EMPLOYER will be recovered from the running account bill on the basis of the actual consumption of materials in the works covered and for which the running account bill has been prepared. After the completion of the WORK, however, the CONTRACTOR has to account for the full quantity of materials supplied to him as per relevant clauses in this document.
- 66.2 The value of the stores/materials as may be supplied to the CONTRACTOR by the EMPLOYER will be debited to the CONTRACTOR's account at the rates shown in the schedule of materials and if they are not entered in the schedule, they will be debited at cost price, which for the purpose of the CONTRACT shall include the cost of carriage and all other expenses whatsoever such as normal storage supervision charges which shall have been incurred in obtaining the same at the EMPLOYER's stores. All materials so supplied to the CONTRACTOR shall remain the absolute property of the EMPLOYER and shall not be removed on any account from the SITE of the WORK, and shall be at all times open for inspection to the ENGINEER-IN-CHARGE. Any such materials remaining unused at the time of the completion or termination of the CONTRACT shall be returned to the EMPLOYER's stores or at a place as directed by the ENGINEER-IN-CHARGE in perfectly good condition at CONTRACTOR's cost.

67 CONDITIONS FOR ISSUE OF MATERIALS:

- 67.1 Materials specified as to be issued by the EMPLOYER will be supplied to the CONTRACTOR by the EMPLOYER from his stores. It shall be responsibility of the CONTRACTOR to take delivery of the materials and arrange for its loading, transport and unloading at the SITE of WORK at his own cost. The materials shall be issued between the working hours and as per the rules of the EMPLOYER as framed from time to time.
- 67.2 The CONTRACTOR shall bear all incidental charges for the storage and safe custody of materials at site after these have been issued to him.
- 67.3 Materials specified as to be issued by the EMPLOYER shall be issued in standard sizes as obtained from the manufacturers.
- 67.4 The CONTRACTOR shall construct suitable Godowns at the SITE of WORK for storing the materials safe against damage by rain, dampness, fire, theft etc. He shall also employ necessary watch and ward establishment for the purpose.
- 67.5 It shall be duty of the CONTRACTOR to inspect the materials supplied to him at the time of taking delivery and satisfy himself that they are in good condition. After the materials have been delivered by the EMPLOYER, it shall be the responsibility of the CONTRACTOR to keep them in good condition and if the materials are damaged or lost, at any time, they shall be repaired and/or replaced by him at his own cost according to the instructions of the ENGINEER-IN-CHARGE.
- 67.6 The EMPLOYER shall not be liable for delay in supply or non-supply of any materials which the EMPLOYER has undertaken to supply where such failure or delay is due to natural calamities, act of enemies, transport and procurement difficulties and any circumstances beyond the control of the EMPLOYER. In no case, the CONTRACTOR shall be entitled to claim any compensation or loss suffered by him on this account.
- 67.7 It shall be responsibility of the CONTRACTOR to arrange in time all materials required for the WORK other than those to be supplied by the EMPLOYER. If, however, in the opinion of the ENGINEER-IN-CHARGE the execution of the WORK is likely to be delayed due to the CONTRACTOR's inability to make arrangements for supply of materials which normally he has to arrange for, the ENGINEER-IN-CHARGE shall have the right at his own discretion to issue such materials, if available with the EMPLOYER or procure the materials from the market or as elsewhere and the CONTRACTOR will be bound to take such materials at the rates decided by the ENGINEER-IN-CHARGE. This, however, does not in any way absolve the CONTRACTOR from responsibility of making arrangements for the supply of such materials in part or in

full, should such a situation occur nor shall this constitute a reason for the delay in the execution of the WORK.

- 67.8 None of the materials supplied to the CONTRACTOR will be utilised by the CONTRACTOR for manufacturing item which can be obtained as supplied from standard manufacturer in finished form.
- 67.9 The CONTRACTOR shall, if desired by the ENGINEER-IN-CHARGE, be required to execute an Indemnity Bond in the prescribed form for safe custody and accounting of all materials issued by the EMPLOYER.
- 67.10 The CONTRACTOR shall furnish to the ENGINEER-IN-CHARGE sufficiently in advance a statement showing his requirement of the quantities of the materials to be supplied by the EMPLOYER and the time when the same will be required by him for the works, so as to enable the ENGINEER-IN-CHARGE to make necessary arrangements for procurement and supply of the material.
- 67.11 Account of the materials issued by the EMPLOYER shall be maintained by CONTRACTOR indicating the daily receipt, consumption and balance in hand. This account shall be maintained in a manner prescribed by the ENGINEER-IN-CHARGE along with all connected papers viz. requisitions, issues, etc., and shall be always available for inspection in the CONTRACTOR's office at SITE.
- 67.12 The CONTRACTOR should see that only the required quantities of materials are got issued. The CONTRACTOR shall not be entitled to cartage and incidental charges for returning the surplus materials, if any, to the stores wherefrom they were issued or to the place as directed by the ENGINEER-IN-CHARGE.
- 67.13 Materials/Equipment(s) supplied by EMPLOYER shall not be utilised for any purpose(s) than issued for.

68 MATERIAL PROCURED WITH ASSISTANCE OF EMPLOYER/RETURN OF SURPLUS:

- 68.1 Notwithstanding anything contained to the contrary in any or all the clauses of this CONTRACT where any materials for the execution of the CONTRACT are procured with the assistance of the EMPLOYER either by issue from EMPLOYER's stock or purchases made under order or permits or licences issued by Government, the CONTRACTOR shall hold the said materials as trustee for the EMPLOYER and use such materials economically and solely for the purpose of the CONTRACT and not dispose them off without the permission of the EMPLOYER and return, if required by the ENGINEER-IN-CHARGE, shall determine having due regard to the condition of the materials. The price allowed to the CONTRACTOR, however, shall not exceed the amount charged to him excluding the storage charges, if any. The decision of the ENGINEER-IN-CHARGE shall be final and conclusive in such matters. In the event of breach of the aforesaid condition, the CONTRACTOR shall, in terms of the licences or permits and/or criminal breach of trust, be liable to compensate the EMPLOYER at double rate or any higher rate, in the event of those materials at that time having higher rate or not being available in the market, then any other rate to be determined by the ENGINEER-IN-CHARGE and his decision shall be final and conclusive.

69 MATERIALS OBTAINED FROM DISMANTLING:

- 69.1 If the CONTRACTOR in the course of execution of the WORK is called upon to dismantle any part for reasons other than those stipulated in Clauses 74 and 77 hereunder, the materials obtained in the WORK of dismantling etc., will be considered as the EMPLOYER's property and will be disposed off to the best advantage of the EMPLOYER.

70 ARTICLES OF VALUE FOUND:

- 70.1 All gold, silver and other minerals of any description and all precious stones, coins, treasure relics, antiquities and other similar things which shall be found in, under or upon the SITE, shall be the property of the EMPLOYER and the CONTRACTOR shall duly preserve the same to the satisfaction of the ENGINEER-IN-CHARGE and shall from time to time deliver the same to such person or persons indicated by the EMPLOYER.

71 DISCREPANCIES BETWEEN INSTRUCTIONS:

- 71.1 Should any discrepancy occur between the various instructions furnished to the CONTRACTOR, his agent or staff or any doubt arises as to the meaning of any such instructions or should there be any misunderstanding between the CONTRACTOR's staff and the ENGINEER-IN-CHARGE's staff, the CONTRACTOR shall refer the matter immediately in writing to the ENGINEER-IN-CHARGE whose decision thereon shall be final and conclusive and no claim for losses alleged to have been caused by such discrepancies between instructions, doubts, or misunderstanding shall in any event be admissible.

72 ACTION WHERE NO SPECIFICATION IS ISSUED:

72.1 In case of any class of WORK for which there is no SPECIFICATION supplied by the EMPLOYER as mentioned in the Tender Documents such WORK shall be carried out in accordance with Indian Standard Specifications and if the Indian Standard Specifications do not cover the same, the WORK should be carried out as per standard Engineering Practice subject to the approval of the ENGINEER-IN-CHARGE.

73 INSPECTION OF WORKS:

73.1 The ENGINEER-IN-CHARGE will have full power and authority to inspect the WORK at any time wherever in progress either on the SITE or at the CONTRACTOR's premises/workshops wherever situated, premises/ workshops of any person, firm or corporation where WORK in connection with the CONTRACT may be in hand or where materials are being or are to be supplied, and the CONTRACTOR shall afford or procure for the ENGINEER-IN- CHARGE every facility and assistance to carry out such inspection. The CONTRACTOR shall, at all time during the usual working hours and at all other time at which reasonable notice of the intention of the ENGINEER-IN- CHARGE or his representative to visit the WORK shall have been given to the CONTRACTOR, either himself be present or receive orders and instructions, or have a responsible agent duly accredited in writing, present for the purpose. Orders given to the CONTRACTOR's agent shall be considered to have the same force as if they had been given to the CONTRACTOR himself. The CONTRACTOR shall give not less than seven days notice in writing to the ENGINEER-IN-CHARGE before covering up or otherwise placing beyond reach of inspection and measurement of any work in order that the same may be inspected and measured. In the event of breach of above the same shall be uncovered at CONTRACTOR's expense for carrying out such measurement or inspection.

73.2 No material shall be dispatched from the CONTRACTOR's stores before obtaining the approval in writing of the Engineer-in-Charge. The CONTRACTOR is to provide at all time during the progress of the WORK and the maintenance period, proper means of access with ladders, gangways etc. and the necessary attendance to move and adopt as directed for inspection or measurements of the WORK by the ENGINEER- IN-CHARGE.

73.3 The CONTRACTOR shall make available to the ENGINEER-IN- CHARGE free of cost all necessary instruments and assistance in checking or setting out of WORK and in the checking of any WORK made by the CONTRACTOR for the purpose of setting out and taking measurements of WORK.

74 TESTS FOR QUALITY OF WORK:

74.1 All workmanship shall be of the respective kinds described in the CONTRACT DOCUMENTS and in accordance with the instructions of the ENGINEER-IN-CHARGE and shall be subjected from time to time to such test at CONTRACTOR's cost as the ENGINEER-IN-CHARGE may direct at the place of manufacture or fabrication or on the site or at all or any such places. The CONTRACTOR shall provide assistance, instruments, labour and materials as are normally required for examining, measuring and testing any workmanship as may be selected and required by the ENGINEER-IN-CHARGE.

74.2 All the tests that will be necessary in connection with the execution of the WORK as decided by the ENGINEER- IN-CHARGE shall be carried out at the field testing laboratory of the EMPLOYER by paying the charges as decided by the EMPLOYER from time to time. In case of non- availability of testing facility with the EMPLOYER, the required test shall be carried out at the cost of CONTRACTOR at Government or any other testing laboratory as directed by ENGINEER-IN-CHARGE.

74.3 If any tests are required to be carried out in conjunction with the WORK or materials or workmanship not supplied by the CONTRACTOR, such tests shall be carried out by the CONTRACTOR as per instructions of ENGINEER-IN-CHARGE and cost of such tests shall be reimbursed by the EMPLOYER.

75 SAMPLES FOR APPROVAL:

75.1 The CONTRACTOR shall furnish to the ENGINEER-IN-CHARGE for approval, when requested or if required by the specifications, adequate samples of all materials and finished to be used in the WORK. Such samples shall be submitted before the WORK is commenced and in ample time to permit tests and examinations thereof. All materials furnished and finishes applied in actual WORK shall be fully equal to the approved samples.

76 ACTION AND COMPENSATION IN CASE OF BAD WORK:

76.1 If it shall appear to the ENGINEER-IN-CHARGE that any work has been executed with unsound, imperfect or unskilled workmanship, or with materials of any inferior description, or that any materials or articles provided by the CONTRACTOR for the execution of the WORK are unsound, or of a quality inferior to that contracted for, or otherwise not in accordance with the CONTRACT, the CONTRACTOR shall on demand in writing from the ENGINEER-IN-CHARGE or his authorized representative specifying the WORK, materials or articles complained of notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and reconstruct the WORK so specified and provide other proper and suitable materials or articles at his own cost and in the event of failure to do so within the period specified by the ENGINEER-IN-CHARGE in his demand aforesaid, the CONTRACTOR shall be liable to pay compensation at the rate of 1 % (One percent) of the estimated cost of the whole WORK, for every week limited to a maximum of 10% (ten percent) of the value of the whole WORK, while his failure to do so shall continue and in the case of any such failure the ENGINEER-IN-CHARGE may on expiry of notice period rectify or remove and re-execute the WORK or remove and replaced with others, the materials or articles complained of to as the case may be at the risk and expense in all respects of the CONTRACTOR. The decision of the Engineering-in-charge as to any question arising under this clause shall be final and conclusive.

77 SUSPENSION OF WORKS:

- 77.1 Subject to the provisions of sub-para (ii) of this clause, the CONTRACTOR shall, if ordered in writing by the ENGINEER-IN-CHARGE, or his representative, temporarily suspend the WORKS or any part thereof for such written order, proceed with the WORK therein ordered to be suspended until, he shall have received a written order to proceed therewith. The CONTRACTOR shall not be entitled to claim compensation for any loss or damage sustained by him by reason of temporary suspension of the WORKS aforesaid. An extension of time for completion, corresponding with the delay caused by any such suspension of the WORKS as aforesaid will be granted to the ONTRACTOR should he apply for the same provided that the suspension was not consequent to any default or failure on the part of the CONTRACTOR.
- 77.2 In case of suspensions of entire WORK, ordered in writing by ENGINEER-IN-CHARGE, for a period of more than two months, the CONTRACTOR shall have the option to terminate the CONTRACT.

78 EMPLOYER MAY DO PART OF WORK:

78.1 Upon failure of the CONTRACTOR to comply with any instructions given in accordance with the provisions of this CONTRACT the EMPLOYER has the alternative right, instead of assuming charge of entire WORK, to place additional labour force, tools, equipments and materials on such parts of the WORK, as the EMPLOYER may designate or also engage another CONTRACTOR to carry out the WORK. In such cases, the EMPLOYER shall deduct from the amount which otherwise might become due to the CONTRACTOR, the cost of such work and material with ten percent (10%) added to cover all departmental charges and should the total amount thereof exceed the amount due to the CONTRACTOR, the CONTRACTOR shall pay the difference to the EMPLOYER.

79 POSSESSION PRIOR TO COMPLETION:

79.1 The ENGINEER-IN-CHARGE shall have the right to take possession of or use any completed or partially completed WORK or part of the WORK. Such possession or use shall not be deemed to be an acceptance of any work completed in accordance with the CONTRACT agreement. If such prior possession or use by the ENGINEER-IN- CHARGE delays the progress of WORK, equitable adjustment in the time of completion will be made and the CONTRACT agreement shall be deemed to be modified accordingly.

80 DEFECTS LIABILITY PERIOD (TWELVE MONTHS PERIOD OF LIABILITY FROM THE DATE OF ISSUE OF COMPLETION CERTIFICATE):

80.1 The CONTRACTOR shall guarantee the installation/WORK for a period of 12 months from the date of completion of WORK as certified by the ENGINEER-IN-CHARGE which is indicated in the Completion Certificate. Any damage or defect that may arise or lie undiscovered at the time of issue of Completion Certificate, connected in any way with the equipment or materials supplied by him or in the workmanship, shall be rectified or replaced by the CONTRACTOR at his own expense as deemed necessary by the

ENGINEER-IN-CHARGE or in default, the ENGINEER- IN-CHARGE may carry out such works by other work and deduct actual cost incurred towards labour, supervision and materials consumables or otherwise plus 100% towards overheads (of which the certificate of ENGINEER-IN-CHARGE shall be final) from any sums that may then be or at any time thereafter, become due to the CONTRACTOR or from his Contract Performance Security, or the proceeds of sale thereof or a sufficient part on thereof.

80.2 If the CONTRACTOR feels that any variation in WORK or in quality of materials or proportions would be beneficial or necessary to fulfil the guarantees called for, he shall bring this to the notice of the ENGINEER- IN-CHARGE in writing. If during the period of liability any portion of the WORK/equipment, is found defective and is rectified/ replaced, the period of liability for such equipment/ portion of WORK shall be operative from the date such rectification/ replacement are carried out and Contract Performance Guarantee shall be furnished separately for the extended period of liability for that portion of WORK/ equipment only. Notwithstanding the above provisions the supplier's, guarantees/warrantees for the replaced equipment shall also be passed on to the EMPLOYER.

80.3 LIMITATION OF LIABILITY Notwithstanding anything contrary contained herein, the aggregate total liability of CONTRACTOR under the Agreement or otherwise shall be limited to 100% of Agreement / Contract Value. However, neither party shall be liable to the other party for any indirect and consequential damages, loss of profits or loss of production.

81 CARE OF WORKS:

81.1 From the commencement to completion of the WORK, the CONTRACTOR shall take full responsibility for the care for all works including all temporary works and in case any damages, loss or injury shall happen to the WORK or to any part thereof or to any temporary works from any cause whatsoever, shall at his own cost repair and make good the same so that at completion the WORK shall be in good order and in conformity in every respects with the requirement of the CONTRACT and the ENGINEER-IN-CHARGE's instructions.

81.2 DEFECTS PRIOR TO TAKING OVER: If at any time, before the WORK is taken over, the ENGINEER-IN-CHARGE shall: a) Decide that any works done or materials used by the CONTRACTOR or by any SUB-CONTRACTOR is defective or not in accordance with the CONTRACT, or that the works or any portion thereof are defective, or do not fulfill the requirements of CONTRACT (all such matters being hereinafter, called 'Defects' in this clause), and b) As soon as reasonably practicable, gives to the CONTRACTOR notice in writing of the said decision, specifying particulars of the defects alleged to exist or to have occurred, then the CONTRACTOR shall at his own expenses and with all speed make good the defects so specified. In case CONTRACTOR shall fail to do so, the EMPLOYER may take, at the cost of the CONTRACTOR, such steps as may in all circumstances, be reasonable to make good such defects. The expenditure so incurred by the EMPLOYER will be recovered from the amount due to the CONTRACTOR. The decision of the ENGINEER-IN-CHARGE with regard to the amount to be recovered from the CONTRACTOR will be final and binding on the CONTRACTOR. As soon as the WORK has been completed in accordance with the CONTRACT (except in minor respects that do not affect their use for the purpose for which they are intended and except for maintenance there of provided in clause 80.1 of General Conditions of Contract) and have passed the tests on completion, the ENGINEER-IN-CHARGE shall issue a certificate (hereinafter called Completion Certificate) in which he shall certify the date on which the WORK have been so completed and have passed the said tests and the EMPLOYER shall be deemed to have taken over the WORK on the date so certified. If the WORK has been divided into various groups in the CONTRACT, the EMPLOYER shall be entitled to take over any group or groups before the other or others and there upon the ENGINEER-IN-CHARGE shall issue a Completion Certificate which will, however, be for such group or groups so taken over only. In such an event if the group /section/ part so taken over is related, to the integrated system of the work, not withstanding date of grant of Completion Certificate for group/ section/ part. The period of liability in respect of such group/ section/ part shall extend 12 (twelve) months from the date of completion of WORK.

81.3 DEFECTS AFTER TAKING OVER: In order that the CONTRACTOR could obtain a COMPLETION CERTIFICATE he shall make good, with all possible speed, any defect arising from the defective materials supplied by the CONTRACTOR or workmanship or any act or omission of the CONTRACT or that may have been noticed or developed, after the works or groups of the works has been taken over, the period allowed for carrying out such WORK will be normally one month. If any defect be not remedied within a

reasonable time, the EMPLOYER may proceed to do the WORK at CONTRACTOR's risk and expense and deduct from the final bill such amount as may be decided by the EMPLOYER. If by reason of any default on the part of the CONTRACTOR a COMPLETION CERTIFICATE has not been issued in respect of any portion of the WORK within one month after the date fixed by the CONTRACT for the completion of the WORK, the EMPLOYER shall be at liberty to use the WORK or any portion thereof in respect of which a completion certificate has not been issued, provided that the WORK or the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completing these works for the issue of Completion Certificate.

82 GUARANTEE/TRANSFER OF GUARANTEE:

- 82.1 For works like water-proofing, acid and alkali resisting materials, pre-construction soil treatment against termite or any other specialized works etc. the CONTRACTOR shall invariably engage SUB-CONTRACTORS who are specialists in the field and firms of repute and such a SUB-CONTRACTOR shall furnish guarantees for their workmanship to the EMPLOYER, through the CONTRACTOR. In case such a SUB-CONTRACTOR/ firm is not prepared to furnish a guarantee to the EMPLOYER, the CONTRACTOR shall give that guarantee to the EMPLOYER directly.

83 TRAINING OF EMPLOYER'S PERSONNEL:

- 83.1 The CONTRACTOR undertakes to provide training to Engineering personnel selected and sent by the EMPLOYER at the works of the CONTRACTOR without any cost to the EMPLOYER. The period and the nature of training for the individual personnel shall be agreed upon mutually between the CONTRACTOR and the EMPLOYER. These engineering personnel shall be given special training at the shops, where the equipment will be manufactured and/ or in their collaborator's works and where possible, in any other plant where equipment manufactured by the CONTRACTOR or his collaborators is under installation or test to enable those personnel to become familiar with the equipment being furnished by the CONTRACTOR. EMPLOYER shall bear only the to and fro fare of the said engineering personnel.

84 REPLACEMENT OF DEFECTIVE PARTS AND MATERIALS:

- 84.1 If during the progress of the WORK, EMPLOYER shall decide and inform in writing to the CONTRACTOR, that the CONTRACTOR has manufactured any plant or part of the plant unsound or imperfect or has furnished plant inferior to the quality specified, the CONTRACTOR on receiving details of such defects or deficiencies shall at his own expenses within 7 (seven) days of his receiving the notice, or otherwise within such time as may be reasonably necessary for making it good, proceed to alter, re-construct or remove such work and furnish fresh equipments upto the standards of the specifications. In case the CONTRACTOR fails to do so, EMPLOYER may on giving the CONTRACTOR 7 (seven) day's notice in writing of his intentions to do so, proceed to remove the portion of the WORK so complained of and at the cost of CONTRACTOR's, perform all such works or furnish all such equipments provided that nothing in the clause shall be deemed to deprive the EMPLOYER of or affect any rights under the CONTRACT, the EMPLOYER may otherwise have in respect of such defects and deficiencies.
- 84.2 The CONTRACTOR's full and extreme liability under this clause shall be satisfied by the payments to the EMPLOYER of the extra cost, of such replacements procured including erection/installation as provided for in the CONTRACT; such extra cost being the ascertained difference between the price paid by the EMPLOYER for such replacements and the CONTRACT price portion for such defective plants and repayments of any sum paid by the EMPLOYER to the CONTRACTOR in respect of such defective plant. Should the EMPLOYER not so replace the defective plant the CONTRACTOR's extreme liability under this clause shall be limited to the repayment of all such sums paid by the EMPLOYER under the CONTRACT for such defective plant.

85 INDEMNITY

- 85.1 If any action is brought before a Court, Tribunal or any other Authority against the Employer or an officer or agent of the EMPLOYER, for the failure, omission or neglect on the part of the CONTRACTOR to perform any acts, matters, covenants or things under the CONTRACT, or damage or injury caused by the alleged omission or negligence on the part of the CONTRACTOR, his agents, representatives or his SUB-CONTRACTOR's, or in connection with any claim based on lawful demands of SUB-CONTRACTOR's workmen suppliers or employees, the CONTRACTOR, shall in such cases indemnify and keep the

EMPLOYER and/or their representatives harmless from all losses, damages, expenses or decrees arising out of such action.

86 CONSTRUCTION AIDS, EQUIPMENTS, TOOLS & TACKLES:

86.1 CONTRACTOR shall be solely responsible for making available for executing the WORK, all requisite CONSTRUCTION EQUIPMENTS, Special Aids, Barges, Cranes and the like, all Tools, Tackles and Testing Equipment and Appliances, including imports of such equipment etc. as required. In case of import of the same the rates applicable for levying of Custom Duty on such Equipment, Tools, & Tackles and the duty drawback applicable thereon shall be ascertained by the CONTRACTOR from the concerned authorities of Government of India. It shall be clearly understood that EMPLOYER shall not in any way be responsible for arranging to obtain Custom Clearance and/or payment of any duties and/or duty draw backs etc. for such equipments so imported by the CONTRACTOR and the CONTRACTOR shall be fully responsible for all taxes, duties and documentation with regard to the same. Tenderer in his own interest may contact, for any clarifications in the matter, concerned agencies/Dept./Ministries of Govt. of India. All clarifications so obtained and interpretations thereof shall be solely the responsibility of the CONTRACTOR.

SECTION-VI CERTIFICATES AND PAYMENTS

87 SCHEDULE OF RATES AND PAYMENTS:

87.1 CONTRACTOR'S REMUNERATION: The price to be paid by the EMPLOYER to CONTRACTOR for the whole of the WORK to be done and for the performance of all the obligations undertaken by the CONTRACTOR under the CONTRACT DOCUMENTS shall be ascertained by the application of the respective Schedule of Rates (the inclusive nature of which is more particularly defined by way of application but not of limitation, with the succeeding sub-clause of this clause) and payment to be made accordingly for the WORK actually executed and approved by the ENGINEER-IN-CHARGE. The sum so ascertained shall (excepting only as and to the extent expressly provided herein) constitute the sole and inclusive remuneration of the CONTRACTOR under the CONTRACT and no further or other payment whatsoever shall be or become due or payable to the CONTRACTOR under the CONTRACT.

87.2 SCHEDULE OF RATES TO BE INCLUSIVE: The prices/rates quoted by the CONTRACTOR shall remain firm till the issue of FINAL CERTIFICATE and shall not be subject to escalation. Schedule of Rates shall be deemed to include and cover all costs, expenses and liabilities of every description and all risks of every kind to be taken in executing, completing and handing over the WORK to the EMPLOYER by the CONTRACTOR. The CONTRACTOR shall be deemed to have known the nature, scope, magnitude and the extent of the WORK and materials required though the CONTRACT DOCUMENT may not fully and precisely furnish them. Tenderer's shall make such provision in the Schedule of Rates as he may consider necessary to cover the cost of such items of WORK and materials as may be reasonable and necessary to complete the WORK. The opinion of the ENGINEER-IN-CHARGE as to the items of WORK which are necessary and reasonable for COMPLETION OF WORK shall be final and binding on the CONTRACTOR, although the same may not be shown on or described specifically in CONTRACT DOCUMENTS. Generality of this present provision shall not be deemed to cut down or limit in any way because in certain cases it may and in other cases it may not be expressly stated that the CONTRACTOR shall do or perform a work or supply articles or perform services at his own cost or without addition of payment or without extra charge or words to the same effect or that it may be stated or not stated that the same are included in and covered by the Schedule of Rates.

87.3 SCHEDULE OF RATES TO COVER CONSTRUCTION EQUIPMENTS, MATERIALS, LABOUR ETC.: Without in any way limiting the provisions of the preceding sub-clause the Schedule of Rates shall be deemed to include and cover the cost of all construction equipment, temporary WORK (except as provided for herein), pumps, materials, labour, insurance, fuel, consumables, stores and appliances to be supplied by the CONTRACTOR and all other matters in connection with each item in the Schedule of Rates and the execution of the WORK or any portion thereof finished, complete in every respect and maintained as shown or described in the CONTRACT DOCUMENTS or as may be ordered in writing during the continuance of the CONTRACT.

87.4 SCHEDULE OF RATES TO COVER ROYALTIES, RENTS AND CLAIMS: The Schedule of Rates (i.e., VALUE OF CONTRACT) shall be deemed to include and cover the cost of all royalties and fees for the articles and processes, protected by letters, patent or otherwise incorporated in or used in connection with the

WORK, also all royalties, rents and other payments in connection with obtaining materials of whatsoever kind for the WORK and shall include an indemnity to the EMPLOYER which the CONTRACTOR hereby gives against all actions, proceedings, claims, damages, costs and expenses arising from the incorporation in or use on the WORK of any such articles, processes or materials, octroi or other municipal or local Board Charges, if levied on materials, equipment or machineries to be brought to site for use on WORK shall be borne by the CONTRACTOR.

87.5 SCHEDULE OF RATES TO COVER TAXES AND DUTIES: No exemption or reduction of Customs Duties, Excise Duties, Sales Tax, Sales Tax on works Contract quay or any port dues, transport charges, stamp duties or Central or State Government or local Body or Municipal Taxes or duties, taxes or charges (from or of any other body), whatsoever, will be granted or obtained, all of which expenses shall be deemed to be included in and covered by the Schedule or Rates. The CONTRACTOR shall also obtain and pay for all permits or other privileges necessary to complete the WORK.

87.6 SCHEDULE OF RATES TO COVER RISKS OF DELAY: The Schedule of Rates shall be deemed to include and cover the risk of all possibilities of delay and interference with the CONTRACTOR's conduct of WORK which occur from any causes including orders of the EMPLOYER in the exercise of his power and on account of extension of time granted due to various reasons and for all other possible or probable causes of delay.

87.7 SCHEDULE OF RATES CANNOT BE ALTERED: For WORK under unit rate basis, no alteration will be allowed in the Schedule of Rates by reason of works or any part of them being modified, altered, extended, diminished or committed. The Schedule of Rates are fully inclusive of rates which have been fixed by the CONTRACTOR and agreed to by the EMPLOYER and cannot be altered. For lumpsum CONTRACTS, the payment will be made according to the WORK actually carried out, for which purpose an item wise, or work wise Schedule of Rates shall be furnished, suitable for evaluating the value of WORK done and preparing running account bill. Payment for any additional work which is not covered in the Schedule of Rates, shall only be released on issuance of change order.

88 PROCEDURE FOR MEASUREMENT AND BILLING OF WORK IN PROGRESS:

88.1 BILLING PROCEDURE: Following procedures shall be adopted for billing of works executed by the CONTRACTOR.

88.1.1 All measurements shall be recorded in quadruplicate on standard measurement sheets supplied by EMPLOYER and submitted to EMPLOYER/CONSULTANT for scrutiny and passing.

88.1.2 EMPLOYER/CONSULTANT shall scrutinize and check the measurements recorded on the sheets and shall certify correctness of the same on the measurement sheets.

88.1.3 ENGINEER-IN-CHARGE shall pass the bills after carrying out the comprehensive checks in accordance with the terms and conditions of the CONTRACTS, within 7 days of submission of the bills, complete in all respects and send the same to the Employer to effect payment to the CONTRACTOR.

88.1.4 GAIL shall make all endeavour to make payments of undisputed amount of the bills submitted based on the joint measurements within 15 (Fifteen) days from the date of certification by the Engineer-in-Charge.

88.1.5 Measurements shall be recorded as per the methods of measurement spelt out in EMPLOYER/CONSULTANT SPECIFICATIONS / CONTRACT DOCUMENT. EMPLOYER/CONSULTANT shall be fully responsible for checking the measurements quantitatively and qualitatively as recorded in the Measurement Books/ Bills.

88.1.6 While preparing the final bills overall measurements will not be taken again. Only volume of work executed since the last measured bill alongwith summary of final measurements will be considered for the final bill. However, a detailed check shall be made as to missing measurements and in case there are any missing items or measurements the same shall be recorded.

88.1.7 COMPUTERISED BILLING SYSTEM : GAIL (India) Limited has introduced Computerised Billing System whereby when the Bills are submitted in GAIL by a Contractor, a receipt number is generated. The Contractor can know the status of the Bill through GAIL's website. **(Not applicable in case of BCPL)**

88.2 SECURED ADVANCE ON MATERIAL: Unless otherwise provided elsewhere in the tender, no 'Secured Advance' on security of materials brought to site for execution of contracted items(s) shall be paid to the Contractor whatsoever.

88.3 DISPUTE IN MODE OF MEASUREMENT: In case of any dispute as to the mode of measurement not covered by the CONTRACT to be adopted for any item of WORK, mode of measurement as per latest Indian Standard Specifications shall be followed.

88.4 ROUNDING-OFF OF AMOUNTS: In calculating the amount of each item due to the CONTRACTOR in every certificate prepared for payment, sum of less than 50 paise shall be omitted and the total amount on each certificate shall be rounded off to the nearest rupees, i.e., sum of less than 50 paise shall be omitted and sums of 50 paise and more upto one rupee shall be reckoned as one rupee.

89 LUMP SUM IN TENDER:

89.1 The payment against any Lumpsum item shall be made only on completion of that item as per the provision of the CONTRACT after certification by ENGINEER-IN-CHARGE.

90 RUNNING ACCOUNT PAYMENTS TO BE REGARDED AS ADVANCE:

90.1 All running account payments shall be regarded as payment by way of advance against the final payment only and not as payments for WORK actually done and completed and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the due performance of the CONTRACT, or any part thereof, in this respect, or of the accruing of any claim by the CONTRACTOR, nor shall it conclude, determine or affect in any way the powers of the EMPLOYER under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise, or in any other way vary or affect the CONTRACT. The final bill shall be submitted by the CONTRACTOR within one month of the date of physical completion of the WORK, otherwise, the ENGINEER-IN-CHARGE's certificate of the measurement and of total amount payable for the WORK accordingly shall be final and binding on all parties

91 NOTICE OF CLAIMS FOR ADDITIONAL PAYMENTS:

91.1 Should the CONTRACTOR consider that he is entitled to any extra payment for any extra/additional WORKS or MATERIAL change in original SPECIFICATIONS carried out by him in respect of WORK he shall forthwith give notice in writing to the ENGINEER-IN-CHARGE that he claims extra payment. Such notice shall be given to the ENGINEER-IN-CHARGE upon which CONTRACTOR bases such claims and such notice shall contain full particulars of the nature of such claim with full details of amount claimed. Irrespective of any provision in the CONTRACT to the contrary, the CONTRACTOR must intimate his intention to lodge claim on the EMPLOYER within 10 (ten) days of the commencement of happening of the event and quantify the claim within 30 (thirty) days, failing which the CONTRACTOR will lose his right to claim any compensation/reimbursement/damages etc. or refer the matter to arbitration. Failure on the part of CONTRACTOR to put forward any claim without the necessary particulars as above within the time above specified shall be an absolute waiver thereof. No omission by EMPLOYER to reject any such claim and no delay in dealing therewith shall be waiver by EMPLOYER of any of this right in respect thereof.

91.2 ENGINEER-IN-CHARGE shall review such claims within a reasonably period of time and cause to discharge these in a manner considered appropriate after due deliberations thereon. However, CONTRACTOR shall be obliged to carry on with the WORK during the period in which his claims are under consideration by the EMPLOYER, irrespective of the outcome of such claims, where additional payments for WORKS considered extra are justifiable in accordance with the CONTRACT provisions, EMPLOYER shall arrange to release the same in the same manner as for normal WORK payments. Such of the extra works so admitted by EMPLOYER shall be governed by all the terms, conditions, stipulations and specifications as are applicable for the CONTRACT. The rates for extra works shall generally be the unit rates provided for in the CONTRACT. In the event unit rates for extra works so executed are not available as per CONTRACT, payments may either be released on day work basis for which daily/hourly rates for workmen and hourly rates for equipment rental shall apply, or on the unit rate for WORK executed shall be derived by interpolation/ extrapolation of unit rates already existing in the CONTRACT. In all the matters pertaining to applicability of rate and admittance of otherwise of an extra work claim of CONTRACTOR the decision of ENGINEER-IN-CHARGE shall be final and binding.

92 PAYMENT OF CONTRACTOR'S BILL:

- 92.1 No payment shall be made for works estimated to cost less than Rs.10,000/- till the whole of the work shall have been completed and a certificate of completion given. But in case of works estimated to cost more than Rs.10,000/-, that CONTRACTOR on submitting the bill thereof be entitled to receive a monthly payment proportionate to the part thereof approved and passed by the ENGINEER-IN-CHARGE, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the CONTRACTOR. This payment will be made after making necessary corrections/deductions as stipulated elsewhere in the CONTRACT DOCUMENT for materials, Contract Performance Security, taxes etc.
- 92.2 Payment due to the CONTRACTOR shall be made by the EMPLOYER by Account Payee cheque forwarding the same to registered office or the notified office of the CONTRACTOR. In no case will EMPLOYER be responsible if the cheque is mislaid or misappropriated by unauthorised person/persons. In all cases, the CONTRACTOR shall present his bill duly pre-receipted on proper revenue stamp payment shall be made in Indian Currency.
- 92.3 In general payment of final bill shall be made to CONTRACTOR within 60 days of the submission of bill on joint measurements, after completion of all the obligations under the CONTRACT.

93 RECEIPT FOR PAYMENT:

- 93.1 Receipt for payment made on account of work when executed by a firm, must be signed by a person holding due power of attorney in this respect on behalf of the CONTRACTOR, except when the CONTRACTOR's are described in their tender as a limited company in which case the receipts must be signed in the name of the company by one of its principal officers or by some other person having authority to give effectual receipt for the company.

94 COMPLETION CERTIFICATE:

- 94.1 APPLICATION FOR COMPLETION CERTIFICATE: When the CONTRACTOR fulfils his obligation under Clause 81.1 he shall be eligible to apply for COMPLETION CERTIFICATE. The ENGINEER-IN-CHARGE shall normally issue to the CONTRACTOR the COMPLETION CERTIFICATE within one month after receiving any application therefore from the CONTRACTOR after verifying from the completion documents and satisfying himself that the WORK has been completed in accordance with and as set out in the construction and erection drawings, and the CONTRACT DOCUMENTS. The CONTRACTOR, after obtaining the COMPLETION CERTIFICATE, is eligible to present the final bill for the WORK executed by him under the terms of CONTRACT.
- 94.2 COMPLETION CERTIFICATE: Within one month of the completion of the WORK in all respects, the CONTRACTOR shall be furnished with a certificate by the ENGINEER-IN-CHARGE of such completion, but no certificate shall be given nor shall the WORK be deemed to have been executed until all scaffolding, surplus materials and rubbish is cleared off the SITE completely nor until the WORK shall have been measured by the ENGINEER-IN-CHARGE whose measurement shall be binding and conclusive. The WORKS will not be considered as complete and taken over by the EMPLOYER, until all the temporary works, labour and staff colonies are cleared to the satisfaction of the ENGINEER-IN-CHARGE. If the CONTRACTOR fails to comply with the requirements of this clause on or before the date fixed for the completion of the WORK, the ENGINEER-IN-CHARGE may at the expense of the CONTRACTOR remove such scaffolding, surplus materials and rubbish and dispose off the same as he thinks fit and clean off such dirt as aforesaid, and the CONTRACTOR shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realised by the sale thereof.
- 94.3 COMPLETION CERTIFICATE DOCUMENTS: For the purpose of Clause 94.0 the following documents will be deemed to form the completion documents:
- (i) The technical documents according to which the WORK was carried out. Six (6) sets of construction drawings showing therein the modification and correction made during the course of execution and signed by the ENGINEER-IN-CHARGE.
 - (ii) COMPLETION CERTIFICATE for 'embedded' and 'covered' up work.
 - (iii) Certificates of final levels as set out for various works.
 - (iv) Certificates of tests performed for various WORKS.

- (v) Material appropriation, Statement for the materials issued by the EMPLOYER for the WORK and list of surplus materials returned to the EMPLOYER's store duly supported by necessary documents.

95 FINAL DECISION AND FINAL CERTIFICATE:

95.1 Upon expiry of the period of liability and subject to the ENGINEER-IN-CHARGE being satisfied that the WORKS have been duly maintained by the CONTRACTOR during monsoon or such period as hereinbefore provided in Clause 80 & 81 and that the CONTRACTOR has in all respect duly made-up any subsidence and performed all his obligations under the CONTRACT, the ENGINEER-IN- CHARGE shall (without prejudice to the rights of the EMPLOYER to retain the provisions of relevant Clause hereof) otherwise give a certificate herein referred to as the FINAL CERTIFICATE to that effect and the CONTRACTOR shall not be considered to have fulfilled the whole of his obligations under CONTRACT until FINAL CERTIFICATE shall have been given by the ENGINEER-IN- CHARGE notwithstanding any previous entry upon the WORK and taking possession, working or using of the same or any part thereof by the EMPLOYER.

96 CERTIFICATE AND PAYMENTS ON EVIDENCE OF COMPLETION:

96.1 Except the FINAL CERTIFICATE, no other certificates or payments against a certificate or on general account shall be taken to be an admission by the EMPLOYER of the due performance of the CONTRACT or any part thereof or of occupancy or validity of any claim by the CONTRACTOR.

97 DEDUCTIONS FROM THE CONTRACT PRICE:

97.1 All costs, damages or expenses which EMPLOYER may have paid or incurred, which under the provisions of the CONTRACT, the CONTRACTOR is liable/will be liable, will be claimed by the EMPLOYER. All such claims shall be billed by the EMPLOYER to the CONTRACTOR regularly as and when they fall due. Such claims shall be paid by the CONTRACTOR within 15 (fifteen) days of the receipt of the corresponding bills and if not paid by the CONTRACTOR within the said period, the EMPLOYER may, then, deduct the amount from any moneys due i.e., Contract Performance Security or becoming due to the CONTRACTOR under the CONTRACT or may be recovered by actions of law or otherwise, if the CONTRACTOR fails to satisfy the EMPLOYER of such claims.

SECTION-VII TAXES AND INSURANCE

98 TAXES, DUTIES, OCTROI ETC:

98.1 The CONTRACTOR agrees to and does hereby accept full and exclusive liability for the payment of any and all Taxes, Duties, including Excise duty, octroi etc. now or hereafter imposed, increased, modified, all the sales taxes, duties, octrois etc. now in force and hereafter increased, imposed or modified, from time to time in respect of WORKS and materials and all contributions and taxes for unemployment compensation, insurance and old age pensions or annuities now or hereafter imposed by any Central or State Government authorities which are imposed with respect to or covered by the wages, salaries, or other compensations paid to the persons employed by the CONTRACTOR and the CONTRACTOR shall be responsible for the compliance of all SUB-CONTRACTORS, with all applicable Central, State, Municipal and local law and regulation and requirement of any Central, State or local Government agency or authority. CONTRACTOR further agrees to defend, indemnify and hold EMPLOYER harmless from any liability or penalty which may be imposed by the Central, State or Local authorities by reason or any violation by CONTRACTOR or SUB-CONTRACTOR of such laws, suits or proceedings that may be brought against the EMPLOYER arising under, growing out of, or by reason of the work provided for by this CONTRACT, by third parties, or by Central or State Government authority or any administrative sub-division thereof. Tax deductions will be made as per the rules and regulations in force in accordance with acts prevailing from time to time.

99 SALES TAX/TURNOVER TAX:

99.1 Tenderer should quote all inclusive prices including the liability of Sales Tax/Turnover Tax whether on the works contract as a whole or in respect of bought out components used by the CONTRACTOR in execution of the CONTRACT. EMPLOYER shall not be responsible for any such liability of the CONTRACTOR in respect of this CONTRACT.

100 STATUTORY VARIATIONS

100.1 Tenderer should quote prices inclusive of excise-duty and sales tax applicable on finished product. Any statutory variations in Excise Duty and sales tax on finished product during the contractual completion period, shall be to the Employer's account for which the Contractor will furnish documentary evidence(s) in support of their claims to GAIL. However, any increase in the rate of these taxes and duties (E.D. and S.T.) beyond the contractual completion period shall be to Contractor's account and any decrease shall be passed on to GAIL.

101 INSURANCE:

101.1 GENERAL CONTRACTOR shall at his own expense arrange secure and maintain insurance with reputable insurance companies to the satisfaction of the EMPLOYER as follows: CONTRACTOR at his cost shall arrange, secure and maintain insurance as may be necessary and to its full value for all such amounts to protect the WORKS in progress from time to time and the interest of EMPLOYER against all risks as detailed herein. The form and the limit of such insurance, as defined here in together with the under works thereof in each case should be as acceptable to the EMPLOYER. However, irrespective of work acceptance the responsibility to maintain adequate insurance coverage at all times during the period of CONTRACT shall be that of CONTRACTOR alone. CONTRACTOR's failure in this regard shall not relieve him of any of his responsibilities and obligations under CONTRACT. Any loss or damage to the equipment, during ocean transportation, port/custom clearance, inland and port handling, inland transportation, storage, erection and commissioning till such time the WORK is taken over by EMPLOYER, shall be to the account of CONTRACTOR. CONTRACTOR shall be responsible for preferring of all claims and make good for the damage or loss by way of repairs and/or replacement of the parts of the Work damaged or lost. CONTRACTOR shall provide the EMPLOYER with a copy of all insurance policies and documents taken out by him in pursuance of the CONTRACT. Such copies of document shall be submitted to the EMPLOYER immediately upon the CONTRACTOR having taken such insurance coverage. CONTRACTOR shall also inform the EMPLOYER at least 60(Sixty) days in advance regarding the expiry cancellation and/or changes in any of such documents and ensure revalidation/renewal etc., as may be necessary well in time. Statutory clearances, if any, in respect of foreign supply required for the purpose of replacement of equipment lost in transit and/or during erection, shall be made available by the EMPLOYER. CONTRACTOR shall, however, be responsible for obtaining requisite licences, port clearances and other formalities relating to such import. The risks that are to be covered under the insurance shall include, but not be limited to the loss or damage in handling, transit, theft, pilferage, riot, civil commotion, weather conditions, accidents of all kinds, fire, war risk (during ocean transportation only) etc. The scope of such insurance shall cover the entire value of supplies of equipments, plants and materials to be imported from time to time. All costs on account of insurance liabilities covered under CONTRACT will be to CONTRACTOR's account and will be included in VALUE OF CONTRACT. However, the EMPLOYER may from time to time, during the currency of the CONTRACT, ask the CONTRACTOR in writing to limit the insurance coverage risk and in such a case, the parties to the CONTRACT will agree for a mutual settlement, for reduction in VALUE OF CONTRACT to the extent of reduced premium amounts CONTRACTOR as far as possible shall cover insurance with Indian Insurance Companies, including marine Insurance during ocean transportation.

101.1.1 EMPLOYEES STATE INSURANCE ACT: The CONTRACTOR agrees to and does hereby accept full and exclusive liability for the compliance with all obligations imposed by the Employee State Insurance Act 1948 and the CONTRACTOR further agrees to defend, indemnify and hold EMPLOYER harmless for any liability or penalty which may be imposed by the Central, State or Local authority by reason of any asserted violation by CONTRACTOR or SUB-CONTRACTOR of the Employees' State Insurance Act, 1948, and also from all claims, suits or proceeding that may be brought against the EMPLOYER arising under, growing out of or by reasons of the work provided for by this CONTRACTOR, by third parties or by Central or State Government authority or any political sub- division thereof. The CONTRACTOR agrees to fill in with the Employee's State Insurance Corporation, the Declaration Forms, and all forms which may be required in respect of the CONTRACTOR's or SUB- CONTRACTOR's employees, who are employed in the WORK provided for or those covered by ESI from time to time under the Agreement. The CONTRACTOR shall deduct and secure the agreement of the SUB- CONTRACTOR to deduct the employee's contribution as per the first schedule of the Employee's State Insurance Act from wages

and affix the Employees Contribution Card at wages payment intervals. The CONTRACTOR shall remit and secure the agreement of SUB-CONTRACTOR to remit to the State Bank of India, Employee's State Insurance Corporation Account, the Employee's contribution as required by the Act. The CONTRACTOR agrees to maintain all cards and Records as required under the Act in respect of employees and payments and the CONTRACTOR shall secure the agreement of the SUB-CONTRACTOR to maintain such records. Any expenses incurred for the contributions, making contributions or maintaining records shall be to the CONTRACTOR's or SUB-CONTRACTOR's account. The EMPLOYER shall retain such sum as may be necessary from the total VALUE OF CONTRACT until the CONTRACTOR shall furnish satisfactory proof that all contributions as required by the Employees State Insurance Act, 1948, have been paid. This will be pending on the CONTRACTOR when the ESI Act is extended to the place of work.

- 101.1.2 **WORKMEN COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE:** Insurance shall be effected for all the CONTRACTOR's employees engaged in the performance of this CONTRACT. If any of the work is sublet, the CONTRACTOR shall require the SUB-CONTRACTOR to provide workman's Compensation and employer's liability insurance for the later's employees if such employees are not covered under the CONTRACTOR's Insurance.
- 101.1.3 **ACCIDENT OR INJURY TO WORKMEN:** The EMPLOYER shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workman or other person in the Employment of the CONTRACTOR or any SUB-CONTRACTOR save and except an accident or injury resulting from any act or default of the EMPLOYER, his agents or servants and the CONTRACTOR shall indemnify and keep indemnified the EMPLOYER against all such damages and compensation (save and except and aforesaid) and against all claims, demands, proceeding, costs, charges and expenses, whatsoever in respect or in relation thereto.
- 101.1.4 **TRANSIT INSURANCE** In respect of all items to be transported by the CONTRACTOR to the SITE of WORK, the cost of transit insurance should be borne by the CONTRACTOR and the quoted price shall be inclusive of this cost.
- 101.1.5 **COMPREHENSIVE AUTOMOBILE INSURANCE** This insurance shall be in such a form as to protect the Contractor against all claims for injuries, disability, disease and death to members of public including EMPLOYER's men and damage to the property of others arising from the use of motor vehicles during on or off the 'site' operations, irrespective of the Employership of such vehicles.
- 101.1.6 **COMPREHENSIVE GENERAL LIABILITY INSURANCE:**
- a) This insurance shall protect the Contractor against all claims arising from injuries, disabilities, disease or death of member of public or damage to property of others due to any act or omission on the part of the Contractor, his agents, his employees, his representatives and Sub- Contractor's or from riots, strikes and civil commotion.
 - b) Contractor shall take suitable Group Personal Accident Insurance Cover for taking care of injury, damage or any other risks in respect of his Engineers and other Supervisory staff who are not covered under Employees State Insurance Act.
 - c) The policy shall cover third party liability. The third party (liability shall cover the loss/ disablement of human life (person not belonging to the Contractor) and also cover the risk of damage to others materials/ equipment/ properties during construction, erection and commissioning at site. The value of third party liability for compensation for loss of human life or partial/full disablement shall be of required statutory value but not less than Rs. 2 lakhs per death, Rs. 1.5 lakhs per full disablement and Rs. 1 lakh per partial disablement and shall nevertheless cover such compensation as may be awarded by Court by Law in India and cover for damage to others equipment/ property as approved by the Purchaser. However, third party risk shall be maximum to Rs. 10(ten) lakhs to death.
 - d) The Contractor shall also arrange suitable insurance to cover damage, loss, accidents, risks etc., in respect of all his plant, equipments and machinery, erection tools & tackles and all other temporary attachments brought by him at site to execute the work.
 - e) The Contractor shall take out insurance policy in the joint name of EMPLOYER and Contractor from one or more nationalised insurance company from any branch office at Project site.

- f) Any such insurance requirements as are hereby established as the minimum policies and coverages which Contractor must secure and keep in force must be complied with, Contractor shall at all times be free to obtain additional or increased coverages at Contractor's sole expenses.

101.1.7 ANY OTHER INSURANCE REQUIRED UNDER LAW OR REGULATIONS OR BY EMPLOYER: CONTRACTOR shall also carry and maintain any and all other insurance(s) which he may be required under any law or regulation from time to time without any extra cost to EMPLOYER. He shall also carry and maintain any other insurance which may be required by the EMPLOYER.

102 DAMAGE TO PROPERTY OR TO ANY PERSON OR ANY THIRD PARTY

102.1 CONTRACTOR shall be responsible for making good to the satisfaction of the EMPLOYER any loss or any damage to structures and properties belonging to the EMPLOYER or being executed or procured or being procured by the EMPLOYER or of other agencies within in the premises of all the work of the EMPLOYER, if such loss or damage is due to fault and/or the negligence or willful acts or omission of the CONTRACTOR, his employees, agents, representatives or SUB-CONTRACTORS.

102.2 The CONTRACTOR shall take sufficient care in moving his plants, equipments and materials from one place to another so that they do not cause any damage to any person or to the property of the EMPLOYER or any third party including overhead and underground cables and in the event of any damage resulting to the property of the EMPLOYER or of a third party during the movement of the aforesaid plant, equipment or materials the cost of such damages including eventual loss of production, operation or services in any plant or establishment as estimated by the EMPLOYER or ascertained or demanded by the third party shall be borne by the CONTRACTOR. Third party liability risk shall be Rupees One lakh for single accident and limited to Rupees Ten lakhs.

102.3 The CONTRACTOR shall indemnify and keep the EMPLOYER harmless of all claims for damages to property other than EMPLOYER's property arising under or by reason of this agreement, if such claims result from the fault and/or negligence or willful acts or omission of the CONTRACTOR, his employees, agents, representative of SUB-CONTRACTOR.

SECTION-VIII LABOUR LAWS

103 LABOUR LAWS:

103.1 No labour below the age of 18 (eighteen) years shall be employed on the WORK.

103.2 The CONTRACTOR shall not pay less than what is provided under law to labourers engaged by him on the WORK.

103.3 The CONTRACTOR shall at his expense comply with all labour laws and keep the EMPLOYER indemnified in respect thereof.

103.4 The CONTRACTOR shall pay equal wages for men and women in accordance with applicable labour laws.

103.5 If the CONTRACTOR is covered under the Contract labour (Regulation and Abolition) Act, he shall obtain a licence from licensing authority (i.e. office of the labour commissioner) by payment of necessary prescribed fee and the deposit, if any, before starting the WORK under the CONTRACT. Such fee/deposit shall be borne by the CONTRACTOR.

103.6 The CONTRACTOR shall employ labour in sufficient numbers either directly or through SUB-CONTRACTOR's to maintain the required rate of progress and of quality to ensure workmanship of the degree specified in the CONTRACT and to the satisfaction of the ENGINEER-IN-CHARGE.

103.7 The CONTRACTOR shall furnish to the ENGINEER-IN- CHARGE the distribution return of the number and description, by trades of the work people employed on the works. The CONTRACTOR shall also submit on the 4th and 19th of every month to the ENGINEER-IN-CHARGE a true statement showing in respect of the second half of the preceding month and the first half of the current month (1) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them and (2) the number of female workers who have been allowed Maternity Benefit as provided in the Maternity Benefit Act 1961 on Rules made thereunder and the amount paid to them.

103.8 The CONTRACTOR shall comply with the provisions of the payment of Wage Act 1936, Employee Provident Fund Act 1952, Minimum Wages Act 1948. Employers Liability Act 1938. Workmen's Compensation Act 1923, Industrial Disputes Act 1947, the Maternity Benefit Act 1961 and Contract Labour

Regulation and Abolition Act 1970, Employment of Children Act 1938 or any modifications thereof or any other law relating thereto and rules made thereunder from time to time.

103.9 The ENGINEER-IN-CHARGE shall on a report having been made by an Inspecting Officer as defined in Contract Labour (Regulation and Abolition) Act 1970 have the power to deduct from the money due to the CONTRACTOR any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non- fulfillment of the Conditions of the Contract for the benefit of workers, non-payment of wages or of deductions made from his or their wages which are not justified by the terms of the Contract or non-observance of the said regulations.

103.10 The CONTRACTOR shall indemnify the EMPLOYER against any payments to be made under and for the observance of the provisions of the aforesaid Acts without prejudice to his right to obtain indemnity from his SUB-CONTRACTOR's. In the event of the CONTRACTOR committing a default or breach of any of the provisions of the aforesaid Acts as amended from time to time, of furnishing any information or submitting or filling and Form/ Register/ Slip under the provisions of these Acts which is materially incorrect then on the report of the inspecting Officers, the CONTRACTOR shall without prejudice to any other liability pay to the EMPLOYER a sum not exceeding Rs.50.00 as Liquidated Damages for every default, breach or furnishing, making, submitting, filling materially incorrect statement as may be fixed by the ENGINEER-IN- CHARGE and in the event of the CONTRACTOR's default continuing in this respect, the Liquidated Damages may be enhanced to Rs.50.00 per day for each day of default subject to a maximum of one percent of the estimated cost of the WORK put to tender. The ENGINEER-IN-CHARGE shall deduct such amount from bills or Contract Performance Security of the CONTRACTOR and credit the same to the Welfare Fund constitute under these acts. The decision of the ENGINEER-IN-CHARGE in this respect shall be final and binding.

104 IMPLEMENTATION OF APPRENTICES ACT, 1961:

104.1 The CONTRACTOR shall comply with the provisions of the Apprentices Act, 1961 and the Rules and Orders issued thereunder from time to time. If he fails to do so, his failure will be a breach of the CONTRACT and the ENGINEER-IN-CHARGE may, at his discretion, cancel the CONTRACT. The CONTRACTOR shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions, of the Act.

105 CONTRACTOR TO INDEMNIFY THE EMPLOYER:

105.1 The CONTRACTOR shall indemnify the EMPLOYER and every member, office and employee of the EMPLOYER, also the ENGINEER-IN-CHARGE and his staff against all actions, proceedings, claims, demands, costs and expenses whatsoever arising out of or in connection with the matters referred to in Clause 102.0 and elsewhere and all actions, proceedings, claims, demands, costs and expenses which may be made against the EMPLOYER for or in respect of or arising out of any failure by the CONTRACTOR in the performance of his obligations under the CONTRACT DOCUMENT. The EMPLOYER shall not be liable for or in respect of or arising out of any failure by the CONTRACTOR in the performance of his obligations under the CONTRACT DOCUMENT. The EMPLOYER shall not be liable for or in respect of any demand or compensation payable by law in respect or in consequence of any accident or injury to any workmen or other person. In the employment of the CONTRACTOR or his SUB-CONTRACTOR the CONTRACTOR shall indemnify and keep indemnified the EMPLOYER against all such damages and compensations and against all claims, damages, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

105.2 PAYMENT OF CLAIMS AND DAMAGES: Should the EMPLOYER have to pay any money in respect of such claims or demands as aforesaid the amount so paid and the costs incurred by the EMPLOYER shall be charged to and paid by the CONTRACTOR and the CONTRACTOR shall not be at liberty to dispute or question the right of the EMPLOYER to make such payments notwithstanding the same, may have been made without the consent or authority or in law or otherwise to the contrary.

105.3 In every case in which by virtue of the provisions of Section 12, Sub-section (i) of workmen's compensation Act, 1923 or other applicable provision of Workmen Compensation Act or any other Act, the EMPLOYER is obliged to pay compensation to a workman employed by the CONTRACTOR in execution of the WORK, the EMPLOYER will recover from the CONTRACTOR the amount of the compensation so paid, and without prejudice to the rights of EMPLOYER under Section 12, Sub- section (2) of the said act,

EMPLOYER shall be at liberty to recover such amount or any part thereof by deducting it from the Contract Performance Security or from any sum due to the CONTRACTOR whether under this CONTRACT or otherwise. The EMPLOYER shall not be bound to contest any claim made under Section 12, Sub-section (i) of the said act, except on the written request of the CONTRACTOR and upon his giving to the EMPLOYER full security for all costs for which the EMPLOYER might become liable in consequence of contesting such claim.

106 HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS:

106.1 In respect of all labour directly or indirectly employed in the WORKS for the performance of the CONTRACTOR's part of this agreement, the CONTRACTOR shall comply with or cause to be complied with all the rules and regulations of the local sanitary and other authorities or as framed by the EMPLOYER from time to time for the protection of health and sanitary arrangements for all workers.

106.2 The CONTRACTOR shall provide in the labour colony all amenities such as electricity, water and other sanitary and health arrangements. The CONTRACTOR shall also provide necessary surface transportation to the place of work and back to the colony for their personnel accommodated in the labour colony.

SECTION-IX APPLICABLE LAWS AND SETTLEMENT OF DISPUTES

107 ARBITRATION:

107.1 Unless otherwise specified, the matters where decision of the Engineer-in-Charge is deemed to be final and binding as provided in the Agreement and the issues/disputes which cannot be mutually resolved within a reasonable time, all disputes shall be referred to arbitration by Sole Arbitrator. The Employer [GAIL (India) Ltd.] shall suggest a panel of three independent and distinguished persons to the bidder/contractor/supplier/buyer (as the case may be) to select any one among them to act as the Sole Arbitrator. In the event of failure of the other parties to select the Sole Arbitrator within 30 days from the receipt of the communication suggesting the panel of arbitrators, the right of selection of the sole arbitrator by the other party shall stand forfeited and the EMPLOYER (BCPL) shall have discretion to proceed with the appointment of the Sole Arbitrator. The decision of Employer on the appointment of the sole arbitrator shall be final and binding on the parties. The award of sole arbitrator shall be final and binding on the parties and unless directed/awarded otherwise by the sole arbitrator, the cost of arbitration proceedings shall be shared equally by the parties. The Arbitration proceedings shall be in English language and venue shall be New Delhi, India. Subject to the above, the provisions of (Indian) Arbitration & Conciliation ACT 1996 and the Rules framed there under shall be applicable. All matter relating to this contract are subject to the exclusive jurisdiction of the court situated in the state of Delhi. Bidders/suppliers/contractors may please note that the Arbitration & Conciliation Act 1996 was enacted by the Indian Parliament and is based on United Nations Commission on International Trade Law (UNCITRAL model law), which were prepared after extensive consultation with Arbitral Institutions and centers of International Commercial Arbitration. The United Nations General Assembly vide resolution 31/98 adopted the UNCITRAL Arbitration rules on 15 December 1976.

107.2 FOR THE SETTLEMENT OF DISPUTES BETWEEN GOVERNMENT DEPARTMENT AND ANOTHER AND ONE GOVERNMENT DEPARTMENT AND PUBLIC ENTERPRISE AND ONE PUBLIC ENTERPRISE AND ANOTHER THE ARBITRATION SHALL BE AS FOLLOWS: "In the event of any dispute or difference between the parties hereto, such dispute or difference shall be resolved amicably by mutual consultation or through the good offices of empowered agencies of the Government. If such resolution is not possible, then, the unresolved dispute or difference shall be referred to arbitration of an arbitrator to be nominated by Secretary, Department of Legal Affairs ("Law Secretary") in terms of the Office Memorandum No.55/3/1/75-CF, dated the 19th December 1975 issued by the Cabinet Secretariat (Department of Cabinet Affairs), as modified from time to time. The Arbitration Act 1940 (10 of 1940) shall not be applicable to the arbitration under this clause. The award of the Arbitrator shall be binding upon parties to the dispute. Provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to Law Secretary whose decision shall bind the parties finally and conclusively.

108 JURISDICTION:

108.1 The CONTRACT shall be governed by and constructed according to the laws in force in INDIA. The CONTRACTOR hereby submits to the jurisdiction of the Courts situated at Guwahati for the purposes of

disputes, actions and proceedings arising out of the CONTRACT, the courts at Guwahati only will have the jurisdiction to hear and decide such disputed, actions and proceedings.

SECTION-X SAFETY CODES

109 GENERAL:

109.1 CONTRACTOR shall adhere to safe construction practice and guard against hazardous, and unsafe working conditions and shall comply with EMPLOYER's safety rules as set forth herein. Prior to start of construction, CONTRACTOR will be furnished copies of EMPLOYER's "Safety Code" for information and guidance, if it has been prepared.

110 SAFETY REGULATIONS:

110.1 In respect of all labour, directly employed in the WORK for the performance of CONTRACTOR's part of this agreement, the CONTRACTOR shall at his own expense arrange for all the safety provisions as per safety codes of C.P.W.D., Indian Standards Institution. The Electricity Act, The Mines Act and such other acts as applicable.

110.2 The CONTRACTOR shall observe and abide by all fire and safety regulations of the EMPLOYER. Before starting construction work CONTRACTOR shall consult with EMPLOYER's safety Engineers or ENGINEER-IN-CHARGE and must make good to the satisfaction of the EMPLOYER any loss or damage due to fire to any portion of the work done or to be done under this agreement or to any of the EMPLOYER's existing property.

111 FIRST AID AND INDUSTRIAL INJURIES:

111.1 CONTRACTOR shall maintain first aid facilities for its employees and those of its SUB-CONTRACTOR.

111.2 CONTRACTOR shall make outside arrangements for ambulance service and for the treatment of industrial injuries. Names of those providing these services shall be furnished to EMPLOYER prior to start of construction and their telephone numbers shall be prominently posted in CONTRACTOR's field office.

111.3 All critical industrial injuries shall be reported promptly to EMPLOYER, and a copy of CONTRACTOR's report covering each personal injury requiring the attention of a physician shall be furnished to the EMPLOYER.

112 GENERAL RULES:

112.1 Smoking within the battery area, tank farm or dock limits is strictly prohibited. Violators of the no smoking rules shall be discharged immediately.

113 CONTRACTOR'S BARRICADES:

113.1 CONTRACTOR shall erect and maintain barricades required in connection with his operation to guard or protect:-

- a) Excavations
- b) Hoisting Areas.
- c) Areas adjudged hazardous by CONTRACTOR's or EMPLOYER's inspectors.
- d) EMPLOYER's existing property subject to damage by CONTRACTOR's Operations.
- e) Rail Road unloading spots.

113.2 CONTRACTOR's employees and those of his SUB- CONTRACTOR's shall become acquainted with EMPLOYER's barricading practice and shall respect the provisions thereof.

113.3 Barricades and hazardous areas adjacent to, but not located in normal routes of travel shall be marked by red flasher lanterns at nights.

114 SCAFFOLDING:

114.1 Suitable scaffolding should be provided for workmen for all works that cannot safely be done from the ground or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying material as well, suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1 in 4 (1 horizontal and 4 vertical).

- 114.2 Scaffolding or staging more than 4 metres above the ground or floor, swing suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise retarded at least one metre high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
- 114.3 Working platform, gangway and stairway should be so constructed that they should not sag unduly or unequally and if the height of platform of the gangway or the stairway is more than 4 metres above the ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as in ii) above.
- 114.4 Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum heights shall be 1 metre.
- 114.5 Safe-means of access shall be provided to all working platforms and other working places, every ladder shall be securely fixed. No portable single ladder shall be over 9 metres in length while the width between side rails in rung ladder shall in no case be less than 30 cms for ladder upto and including 3 metres in length. For longer ladder this width should be increased 5mm for each additional foot of length. Uniform steps spacing shall not exceed 30 cms. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed to cause danger or inconvenience to any person or public. The CONTRACTOR shall also provide all necessary fencing and lights to protect the workers and staff from accidents, and shall be bound to bear the expenses of defense of every suit, action or other proceeding of law that may be brought by any person for injury sustained owing to neglect of the above precautions and pay any damages and costs which may be awarded in any such suit or action or proceeding to any such person or which may with the consent of the CONTRACTOR be paid to compromise any claim by any such person.

115 EXCAVATION AND TRENCHING:

- 115.1 All trenches 1.2 metres or more in depth, shall at all times be supplied with at least one ladder for each 50 metres length or fraction thereof. Ladder shall be extended from bottom of the trenches to atleast 1 metre above the surface of the ground. The sides of the trenches which are 1.5M in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides to collapse. The excavated materials shall not be placed within 1.5 metres of the edge of the trench or half of the trench width whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or under-cutting shall be done.

116 DEMOLITION/GENERAL SAFETY:

- 116.1 Before any demolition work is commenced and also during the progress of the demolition work
- All roads and open areas adjacent to the work site shall either be closed or suitably protected.
 - No electric cable or apparatus which is liable to be a source of danger shall remain electrically charged.
 - All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.
- 116.2 All necessary personal safety equipment as considered adequate by the ENGINEER-IN-CHARGE, should be kept available for the use of the persons employed on the SITE and maintained in condition suitable for immediate use, and the CONTRACTOR shall take adequate steps to ensure proper use of equipment by those concerned.
- Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective gloves.
 - Those engaged in white washing and mixing or stacking or cement bags or any material which are injurious to the eyes be provided with protective goggles.
 - Those engaged in welding and cutting works shall be provided with protective face & eye shield, hand gloves, etc.

- d) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- e) When workers are employed in sewers and manholes, which are in use, the CONTRACTOR shall ensure that the manhole covers are opened and are ventilated atleast for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or
- f) board to prevent accident to the public.
- g) The CONTRACTOR shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Wherever men above the age of 18 years are employed on the work of lead painting, the following precautions should be taken.
 - 1) No paint containing lead or lead product shall be used except in the form of paste or readymade paint.
 - 2) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
 - 3) Overalls shall be supplied by the CONTRACTOR to the workmen and adequate facilities shall be provided to enable the working painters to wash them during and on cessation of work.

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

116.2.2 Use of hoisting machines and tackles including their attachments, anchorage and supports shall conform to the following standards or conditions:

- a. These shall be of good mechanical construction, sound materials and adequate strength and free from patent defect and shall be kept in good working order.
- b. Every rope used in hoisting or lowering materials or as means of suspension shall be of durable quality and adequate strength and free from patent defects.
- b) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding, winch or give signals to the operator.
- c) In case of every hoisting machine and of every chain ring hook, shackle, swivel, and pulley block used in hoisting or lowering or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gears referred to above shall be plainly marked with the safe working load of the conditions under which it is applicable and the same shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond safe working load except for the purpose of testing.
- d) In case of departmental machine, the safe working load shall be notified by the ENGINEER-IN-CHARGE. As regards CONTRACTOR's machines, the CONTRACTOR shall notify the safe working load of the machine to the ENGINEER-IN-CHARGE whenever he brings any machinery to SITE of WORK and get it verified by the Engineer concerned.
- e) Motors, gears, transmission lines, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as to reduce to minimum the accidental descent of the load, adequate precautions should be taken to reduce the minimum risk of any part or parts of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves, and boots as may be necessary should be provided. The workers shall not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

116.2.3 All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe conditions and no scaffolds, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.

116.2.4 These safety provisions should be brought to the notice of all concerned by displaying on a notice board at a prominent place at the work-spot. The person responsible for compliance of the safety code shall be named therein by the CONTRACTOR.

- 116.2.5 To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by the CONTRACTOR shall be open to inspection by the Welfare Officer, ENGINEER-IN- CHARGE or safety Engineer of the Administration or their representatives.
- 116.2.6 Notwithstanding the above clauses there is nothing in these to exempt the CONTRACTOR for the operations of any other Act or rules in force in the Republic of India. The work throughout including any temporary works shall be carried out in such a manner as not to interfere in any way whatsoever with the traffic on any roads or footpath at the site or in the vicinity thereto or any existing works whether the property of the Administration or of a third party. In addition to the above, the CONTRACTOR shall abide by the safety code provision as per C.P.W.D. Safety code and Indian Standard Safety Code from time to time.

117 CARE IN HANDLING INFLAMMABLE GAS:

- 117.1.1 The CONTRACTOR has to ensure all precautionary measures and exercise utmost care in handling the inflammable gas cylinder/inflammable liquids/paints etc. as required under the law and/or as advised by the fire Authorities of the EMPLOYER.

118 TEMPORARY COMBUSTIBLE STRUCTURES:

- 118.1 Temporary combustible structures will not be built near or around work site.

119 PRECAUTIONS AGAINST FIRE:

- 119.1.1 The CONTRACTOR will have to provide Fire Extinguishers, Fire Buckets and drums at worksite as recommended by ENGINEER-IN-CHARGE. They will have to ensure all precautionary measures and exercise utmost care in handling the inflammable gas cylinders/ inflammable liquid/ paints etc. as advised by ENGINEER-IN-CHARGE. Temporary combustible structures will not be built near or around the work-site.

120 EXPLOSIVES:

- 120.1.1 Explosives shall not be stored or used on the WORK or on the SITE by the CONTRACTOR without the permission of the ENGINEER-IN-CHARGE in writing and then only in the manner and to the extent to which such permission is given. When explosives are required for the WORK they will be stored in a special magazine to be provided at the cost of the CONTRACTOR in accordance with the Explosives Rules. The CONTRACTOR shall obtain the necessary licence for the storage and the use of explosives and all operations in which or for which explosives are employed shall be at sole risk and responsibility of the CONTRACTOR and the CONTRACTOR shall indemnify the EMPLOYER against any loss or damage resulting directly or indirectly therefrom.

121 MINES ACT:

- 121.1.1 SAFETY CODE: The CONTRACTOR shall at his own expense arrange for the safety provisions as required by the ENGINEER-IN-CHARGE in respect of all labour directly employed for performance of the WORKS and shall provide all facilities in connection therewith. In case the CONTRACTOR fails to make arrangements and provides necessary facilities as aforesaid, the ENGINEER-IN- CHARGE shall be entitled to do so and recover the costs thereof from the CONTRACTOR.
- 121.1.2 Failure to comply with Safety Code or the provisions relating to report on accidents and to grant of maternity benefits to female workers shall make the CONTRACTOR liable to pay Company Liquidated Damages an amount not exceeding Rs.50/- for each default or materially incorrect statement. The decision of the ENGINEER-IN-CHARGE in such matters based on reports from the Inspecting Officer or from representatives of ENGINEER-IN-CHARGE shall be final and binding and deductions for recovery of such Liquidated Damages may be made from any amount payable to the CONTRACTOR from all the provisions of the Mines Act, 1952 or any statutory modifications or re-enactment thereof the time being in force and any Rules and Regulations made there under in respect of all the persons employed by him under this CONTRACT and shall indemnify the EMPLOYER from and against any claim under the Mines Act or the rules and regulations framed there under by or on behalf of any persons employed by him or otherwise.

122 PRESERVATION OF PLACE:

122.1.1 The CONTRACTOR shall take requisite precautions and use his best endeavors to prevent any riotous or unlawful behaviour by or amongst his worker and others employed or the works and for the preservation of peace and protection of the inhabitants and security of property in the neighborhood of the WORK. In the event of the EMPLOYER requiring the maintenance of a Special Police Force at or in the vicinity of the site during the tenure of works, the expenses thereof shall be borne by the CONTRACTOR and if paid by the EMPLOYER shall be recoverable from the CONTRACTOR.

123 OUTBREAK OF INFECTIOUS DISEASES:

123.1.1 The CONTRACTOR shall remove from his camp such labour and their facilities who refuse protective inoculation and vaccination when called upon to do so by the ENGINEER-IN-CHARGE's representative. Should Cholera, Plague or other infectious diseases break out the CONTRACTOR shall burn the huts, beddings, clothes and other belongings or used by the infected parties and promptly erect new huts on healthy sites as required by the ENGINEER-IN-CHARGE failing which within the time specified in the Engineer's requisition, the work may be done by the EMPLOYER and the cost thereof recovered from the CONTRACTOR.

124 USE OF INTOXICANTS:

124.1.1 The unauthorized sale of spirits or other intoxicants, beverages upon the work in any of the buildings, encampments or tenements owned, occupied by or within the control of the CONTRACTOR or any of his employee is forbidden and the CONTRACTOR shall exercise his influence and authority to the utmost extent to secure strict compliance with this condition. In addition to the above, the CONTRACTOR shall abide by the safety code provision as per C.P.W.D. safety code and Indian Standard Code framed from time to time.

PROFORMA OF INDEMNITY BOND FOR SUPPLY OF MATERIALS BY EMPLOYER

(To be executed on non-judicial stamped paper of appropriate value)

WHEREAS Brahmaputra Cracker & Polymer Ltd. (hereinafter referred to as BCPL) which expression shall unless repugnant to the context includes their legal representatives, successors and assigns having their registered office at Hotel Brahmaputra Ashok, M. G. Road, Guwahati - 781001 has entered into a CONTRACT with _____ (hereinafter referred to as the CONTRACTOR which expression shall unless repugnant to the context include their legal representatives, successors and assigns) for _____ on the terms and conditions as set out, inter-alia, in the CONTRACT No..... Dated..... and various documents forming part thereof hereinafter collectively referred to as the "CONTRACT" which expression shall include all amendments, modifications and/or variations thereto.

AND WHEREAS i) BCPL has agreed to supply to the CONTRACTOR, equipment, plants and materials (finished, semi-finished and raw) for the purpose of EXECUTION of the said CONTRACT by the CONTRACTOR (the equipment, plants and materials to be supplied by BCPL to the CONTRACTOR, hereinafter for the sake of brevity referred to as the "said materials") and pending execution by the CONTRACTOR of the CONTRACT incorporating the said materials, the said materials shall be under the custody and charge of the CONTRACTOR and shall be kept, stored, altered, worked upon and/or fabricated at the sole risk and expense of the CONTRACTOR.

ii) As a pre-condition to the supply of the said materials by BCPL to the CONTRACTOR, BCPL has required the CONTRACTOR to furnish to BCPL an Indemnity Bond in the manner and upon terms and conditions hereinafter indicated. NOW, THEREFORE, in consideration of the premises aforesaid the CONTRACTOR hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified BCPL from and against all loss, damage and destruction (inclusive but not limited to any or all loss or damage or destruction to or of the said materials or any item or part thereof by theft, pilferage, fire, flood, storm, tempest, lightning, explosion, storage, chemical or physical action or reaction, binding, warping, exposure, rusting, faulty workmanship, faulty fabrication, or faulty method or technique of fabrication, strike, riot, civil commotion, or other act or omission or commission whatsoever within or beyond the control of the CONTRACTOR, misuse and misappropriation (inclusive but not limited to the misuse or misappropriation by the CONTRACTOR and the Contractor's servants and/or agents) whatsoever to, or of in the said materials or any part of them thereof from the date that the same or relative part of item thereof was supplied to the CONTRACTOR upto and until the date of return to BCPL of the said materials or relative part of item thereof or completed fabricated works(s) incorporating the said material and undertake to pay to BCPL forthwith on demand in writing without protest or demur the value as specified by BCPL of the said material or item or part thereof, lost, damaged, destroyed, misused and/or misappropriated, as the case may be or, together with BCPL'S costs and expenses (inclusive of but not limited to handling, transportation, cartage, insurance, freight, packing and inspection costs/or expenses upto) and aggregate limit of Rs. _____ (Rupees _____ Only). AND THE CONTRACTOR hereby agrees with BCPL that: i) This Indemnity/Undertaking shall be a continuing Indemnity/ Undertaking and shall remain valid and irrevocable for all claims of BCPL arising hereunder upto and until the midnight of _____. However, if the CONTRACT for which this Indemnity/Undertaking is given is not completed by this date, the CONTRACTOR hereby agrees to extend the Indemnity/Undertaking till such time as is required to fulfill the CONTRACT.

ii) This Indemnity/Undertaking shall not be determined by any change in constitution or upon insolvency of the CONTRACTOR but shall be in all respects and for all purposes be binding and operative until payment of all moneys payable to BCPL in terms of hereof.

iii) The mere statement of allegation made by or on behalf of BCPL in any notice or demand or other writing addressed to the CONTRACTOR as to any of the said material or item or part thereof having been lost , damaged, destroyed, misused or misappropriated while in the custody of the CONTRACTOR and/or prior to completion of the completed fabricated work(s) and delivery to job site thereof incorporating the said materials shall be conclusive of the factum of the said material or item or part thereof having been supplied to the CONTRACTOR and/or the loss, damage, destruction, misuse or misappropriation thereof, as the case may be, while in the custody of the CONTRACTOR and/or prior to the completion of the completed fabricated work(s) and delivery to job site thereof incorporating the said materials without necessity on the part of BCPL to produce any documentary proof or other evidence whatsoever in support of this.

iv) The amount stated in any notice of demand addressed by BCPL to the CONTRACTOR as to the value of such said materials lost, damaged, destroyed, misused or misappropriated, inclusive relative to the costs and expenses incurred by BCPL in connection therewith shall be conclusive of the value of such said materials and the said cost and expenses as also of the amount liable to be paid to BCPL to produce any voucher, bill or other documentation or evidence whatsoever in support thereof and such amount shall be paid without any demur and on demand and no dispute shall be raised concerning the same. The undersigned has full power to execute this Indemnity Bond on behalf of the

CONTRACTOR under the Power of Attorney dated
(SIGNED BY COMPETENT AUTHORITY)

Place:
Dated:
Official seal of the CONTRACTOR

PROFORMA FOR CONTRACT AGREEMENT

LOA No. BCPL / Dated -----

Contract Agreement for the work of ----- of Brahmaputra Cracker & Polymer Ltd. (BCPL) made on -----
- between (Name and Address)-----, hereinafter called the "CONTRACTOR" (which term shall unless
excluded by or repugnant to the subject or context include
its successors and permitted assignees) of the one part and BCPL hereinafter called the "EMPLOYER" (which
term shall, unless excluded by or repugnant to the subject or context include its successors and assignees) of
the
other part. WHEREAS

A. The EMPLOYER being desirous of having provided and executed certain work mentioned, enumerated or
referred to in the Tender Documents including Letter Inviting Tender, General Tender Notice, General
Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, Plans, Time Schedule of
completion of jobs, Schedule of Rates, Agreed Variations, other documents has called for Tender.

B. The CONTRACTOR has inspected the SITE and surroundings of WORK specified in the Tender Documents
and has satisfied himself by careful examination before submitting his tender as to the nature of the surface,
strata, soil, sub-soil and ground, the form and nature of site and local conditions, the quantities, nature and
magnitude of the work, the availability of labour and materials necessary for the execution of work, the means
of access to SITE, the supply of power and water thereto and the accommodation he may require and has
made local and independent enquiries and obtained complete information as to the matters and thing
referred to, or implied in the tender documents or having any connection therewith and has considered the
nature and extent of all probable and possible situations, delays, hindrances or interferences to or with the
execution and completion of the work to be carried out under the CONTRACT, and has examined and
considered all other matters, conditions and things and probable and possible contingencies, and generally all
matters incidental thereto and ancillary thereof affecting the execution and completion of the WORK and
which might have influenced him in making his tender.

C. The Tender Documents including the Notice Letter Inviting Tender, General Conditions of Contract, Special
Conditions of Contract, Schedule of Rates, General Obligations, SPECIFICATIONS, DRAWINGS, PLANS, Time
Schedule for completion of Jobs, Letter of Acceptance of Tender and any statement of agreed variations with
its enclosures copies of which are hereto annexed form
part of this CONTRACT though separately set out herein and are included in the expression "CONTRACT"
wherever herein used.

AND WHEREAS The EMPLOYER accepted the Tender of the CONTRACTOR for the provision and the execution
of the said WORK at the rates stated in the schedule of quantities of the work and finally approved by
EMPLOYER (hereinafter called the "Schedule of Rates") upon the terms and subject to the conditions of
CONTRACT.

NOW THIS AGREEMENT WITNESSETH AND IT IS HEREBY AGREED AND DECLARED AS FOLLOWS:- 1. In
consideration of the payment to be made to the CONTRACTOR for the WORK to be executed by him, the
CONTRACTOR hereby covenants with

EMPLOYER that the CONTRACTOR shall and will duly provide, execute and complete the said work and shall do
and perform all other acts and things in the CONTRACT mentioned or described or which are to be implied
there from or may be reasonably necessary for the completion of the said WORK and at the said times and in
the manner and subject to the terms and conditions or
stipulations mentioned in the contract.

2. In consideration of the due provision execution and completion of the said WORK, EMPLOYER does hereby
agree with the CONTRACTOR that the EMPLOYER will pay to the CONTRACTOR the respective amounts for the

WORK actually done by him and approved by the EMPLOYER at the Schedule of Rates and such other sum payable to the CONTRACTOR under provision of CONTRACT, such payment to be made at such time in such manner as provided for in the CONTRACT. A N D

3. In consideration of the due provision, execution and completion of the said WORK the CONTRACTOR does hereby agree to pay such sums as may be due to the EMPLOYER for the services rendered by the EMPLOYER to the CONTRACTOR, such as power supply, water supply and others as set for in the said CONTRACT and such other sums as may become payable to the EMPLOYER towards the controlled items of consumable materials or towards loss, damage to the EMPLOYER'S equipment, materials construction plant and machinery, such payments to be made at such time and in such manner as is provided in the CONTRACT. It is specifically and distinctly understood and agreed between the EMPLOYER and the CONTRACTOR that the CONTRACTOR shall have no right, title or interest in the SITE made available by the EMPLOYER for execution of the works or in the building, structures or work executed on the said SITE by the CONTRACTOR or in the goods, articles, materials etc., brought on the said SITE (unless the same specifically belongs to the CONTRACTOR) and the CONTRACTOR shall not have or deemed to have any lien whatsoever charge for unpaid bills will not be entitled to assume or retain possession or control of the SITE or structures and the EMPLOYER shall have an absolute and unfettered right to take full possession of SITE and to remove the CONTRACTOR, their servants, agents and materials belonging to the CONTRACTOR and lying on the SITE. The CONTRACTOR shall be allowed to enter upon the SITE for execution of the WORK only as a licensee simpliciter and shall not have any claim, right, title or interest in the SITE or the structures erected thereon and the EMPLOYER shall be entitled to terminate such license at any time without assigning any reason. The materials including sand, gravel, stone, loose, earth, rock etc., dug up or excavated from the said SITE shall, unless otherwise expressly agreed under this CONTRACT, exclusively belong to the EMPLOYER and the CONTRACTOR shall have no right to claim over the same and such excavation and materials should be disposed off on account of the EMPLOYER according to the instruction in writing issued from time to time by the ENGINEER-IN-CHARGE In Witness whereof the parties have executed these presents in the day and the year first above written. Signed and Delivered for and on Signed and Delivered for and on behalf of EMPLOYER.

on behalf of the CONTRACTORS.

BRAHMAPUTRA CRACKER & POLYMER LIMITED

(NAME OF THE CONTRACTOR)

Date : _____

Date : _____

Place: _____

Place: _____

IN PRESENCE OF TWO WITNESSES

1. _____

1. _____

2. _____

2. _____

PROFORMA FOR BANK GUARANTEE FOR EARNEST MONEY DEPOSIT
(To be stamped in accordance with the Stamp Act)

Ref.-----

Bank Guarantee No.-----

Date-----

To
Brahmaputra Cracker & Polymer Ltd.
Main Fire Station Building, BCPL Project Site,
Lepetkata-786006, Dibrugarh
Assam

Dear Sir (s),

In accordance with Letter inviting Tender under your reference No.-----

M/s-----having their Registered/Head Office at-----
----- (hereinafter called the Bidder) wish to participate in the said tender
for-----

As an irrevocable Bank Guarantee against Earnest Money Deposit for an amount of -----is required to be submitted by the Bidder as a condition precedent for participation in the said Tender which amount is liable to be forfeited on the happening of any contingencies mentioned in the Tender Document.

We, the -----Bank at----- having our Head Office -----

(Local Address) guarantee and undertake to pay immediately on demand by Brahmaputra Cracker & Polymer Limited., the amount -----without any reservation, protest, demur and recourse. Any such demand made by BCPL, shall be conclusive and binding on us irrespective of any dispute or difference raised by the Bidder.

This guarantee shall be irrevocable and shall remain, valid upto----- (This date should be 180 days (One hundred & eighty days) after the date finally set out for closing of tender). If any further extension of this guarantee is required the same shall be extended to such required period on receiving instructions from M/s----- on whose behalf this guarantee is issued.

In Witness whereof the Bank, through its authorized officer, has set its hand and stamp on this -----
-----day of -----2012 ----- at -----

WITNESS :

(SIGNATURE)
(NAME)

(SIGNATURE)
(NAME)

(OFFICIAL ADDRESS)

Designation with Bank Stamp
Attorney as per _____
Power of Attorney No.
Date : _____

PROFORMA FOR BANK GUARANTEE FOR SECURITY DEPOSIT
(ON NON-JUDICIAL PAPER OF APPROPRIATE VALUE)

To
Brahmaputra Cracker & Polymer Ltd.
Main Fire Station Building, BCPL Project Site,
Lepetkata-786006, Dibrugarh
Assam

Dear Sirs,

M/s _____ have been awarded the work of _____ for Brahmaputra Cracker & Polymer Limited, Dibrugarh – 786006, Assam. The Contracts conditions provided that the CONTRACTOR shall pay a sum of Rs----- (Rupees as Initial / full Security Deposit in the form therein mentioned). The form of payment of Security Deposit includes guarantee executed by Nationalized Bank, undertaking full responsibility to indemnify Brahmaputra Cracker & Polymer Limited, in case of default.

The said-----has approached us and at their request and in consideration of the premises we having our office at ----- have agreed to give such guarantee as hereinafter mentioned.

1. We _____ hereby undertake and agree with you that if default shall be made by M/s ----- in performing any of the terms and conditions of the tender or in payment of any money payable to Brahmaputra Cracker & Polymer Limited, we shall on demand pay to you in such manner as you may direct the said amount of Rupees----- only or such portion thereof not exceeding the said sum as you may from time to time require.
2. You will have the full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on your under the contract with the said -----and to enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said -----which under law relating to the sureties would but for provision have the effect of releasing us.
3. Your right to recover the said sum of ₹. ----- (Rupees -----) from us in manner aforesaid will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s ----- --and/or that any dispute or disputes are pending before any officer, tribunal or court.
4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the save said but shall in all respects and for all purpose be binding and operative until payment of all money due to you in respect of such liabilities is paid.
5. This guarantee shall be irrevocable and shall remain valid upto-----If any further extension of this guarantee is required the same shall be extended to such required period on receiving instructions from M/s----- on whose behalf this guarantee is issued.
6. We have power to issue this guarantee in your favour under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney dated ----- granted to him by the Bank.

Yours faithfully,

_____ Bank

By its Constituted Attorney Signature of a
person duly authorized to sign on behalf of
the Bank.

SCHEDULE OF RATE (SOR)

EXTERNAL WATER SUPPLY AT BCPL AND CISF TOWNSHIP, OVERHEAD AND UNDER GROUND WATER TANK, PUMP HOUSE, SECURITY OFFICE AND TELECOM/IT EQUIPMENT ROOM AT BCPL TOWNSHIP AND SUBSTATION AT BCPL AND CISF TOWNSHIP FOR M/S BRAHMAPUTRA CRACKER & POLYMER LIMITED AT LEPETKATA, DIBRUGARH, (ASSAM)

BOQ OF SECURITY OFFICE FOR BCPL , SUBSTATION FOR BCPL , SUBSTATION FOR CISF , TELECOM-IT EQUIPMENT ROOM FOR BCPL , PUMP HOUSE FOR BCPL AT LEPETKATA , DIBRUGARH.

Sl. no.	Description of work	Unit	Qty.	Rate		Amount
				Rate in fig	Rate in words	
1.00	EARTH WORK :					
1.01	Earth work in excavation for foundation trenches of walls, retaining walls, retaining walls, footings of columns, steps, septic tank etc., including refilling (return filling) the quantity as necessary after completion of work, breaking clods in return filling, dressing, watering and ramming etc. and removal of surplus earth with all lead and lifts as directed and specified in following classifications of soils including bailing out water where necessary as directed and specified.(A) Upto a depth of 2.00m below the existing ground level. (a) In ordinary soil	Cum	1046.56			
1.02	Earth/ Sand filling in plinth in layer not more than 150mm thick including necessary, carriage, watering, ramming etc. complete as directed and specified including payment of land compensation, Forest Royalty, Sales Tax and other duties and taxes as may be necessary. © With silt (predominantly non plastic) by truck carriage including loading and unloading.	Cum	393.36			
2.00	P.C.C. WORK :					
2.01	Plain cement concrete works with coarse aggregate, of sizes 13mm to 32mm in foundation bed for footing, steps, walls, brick works etc. as directed and specified including dewatering if necessary, and curing complete (Shuttering where necessary shall be measured and paid separately) (a) In prop. 1 cement : 3 sand : 6 coarse aggregate by volume.	Cum	20.07			
2.02	Plain cement concrete floor base in prop 1:3:6 laid in alternate bays as specified with coarse agg. of size 13mm to 32mm including dewatering if necessary, and curing etc. complete. (ii) 50 mm thick in prop 1:3:6	Sqm	732.80			
3.00	R.C.C. WORK :					
3.01	Providing and laying plain/reinforced cement concrete works with coarse sand & 20mm downgraded stone aggregate including dewatering if necessary, and curing complete but excluding cost of form work and reinforcement for reinforced cement concrete work (form work and reinforcement will be measured and paid separately.) I) Using mixture machine (A) In sub-structure up to plinth level. Foundation, footings, columns with base, tie and plinth beam, pile cap, base, slab, retaining walls, walls of septic tank, inspection pit and the like and other works not less than 100mm thick up to plinth level. (b) M20 or prop. 1:1.5:3	Cum	273.30			

	(B) In superstructure from plinth level to 1st floor level.. ii) Columns, pillars, posts, struts, suspended floor, roof, landing, shelf and support, balcony, lintel, sill band, beam, girder, bressumer, cantilever, staircase (except spiral stair case and landing) including preparing the top surface and finishing of nosing. (b) M20 or prop. 1:1.5:3	Cum	273.37			
	Vertical and horizontal fins (thickness not more than 100mm) individually or forming box louvre and projected band. b) m20 grade concrete or prop. 1:1.5:3	Cum	1.36			
4.00	D.P.C. WORK :					
4.01	Providing and laying 25mm thick damp proof course with cement concrete in prop 1:1.5:3 with graded stone agg. of 10mm down nominal size including providing approved damp proof admixture in proportion as recommended by the manufacturer including curing etc. complete as directed.	Sqm	93.17			
5.00	SHUTTERING AND FORM WORK :					
5.01	Providing form work of ordinary timber planking so as to give a rough finish including centering, shuttering, strutting and propping etc., height of propping and centering below supporting floor to ceiling not exceeding 4.0m and removal of the same for in-situ reinforced concrete and plain concrete work in. (a) Foundation, footing, base of columns, pile cap, raft and mass concrete works etc. (i) Using 25 mm thick plank.	Sqm	1308.65			
	(b) Columns, pillars, posts and strut. a) Square, Rectangular, polygonal in plan or any shape like Tee/L etc. having plane vertical face. (i) Using 25 mm thick plank.	Sqm	305.55			
	(c) Sides and soffits of Beam, beam hunchings, cantilever, girders, bressumers, lintels and horizontal ties. (a) For depth not exceeding 1.0M (i) Using 25 mm thick plank.	Sqm	737.96			
	Flat surface such as soffits of suspended floors, roofs, landings, cantilever slabs, chajjas, balconies and the like. (ii) Using 25mm thick plank.	Sqm	968.85			
	Vertical tiles, fins, sun breaker, louvers, bands, (ii) Using 25mm thick plank	Sqm	13.56			
6.00	BRICK WORK :					
6.01	Providing brick soling in foundation and under floor with stone/best quality picked jhama bricks, sand packed and laid to level and in panel after preparing the sub-grade as directed including all labour and materials, and if necessary dewatering, complete. (a) Brick on flat soling	Sqm	1314.83			
6.02	Brick work in cement mortar with 1st class brick including racking out joints and dewatering if necessary, and curing complete					

	as directed in sub-structure upto plinth level . (b) In prop. 1:4	Cum	56.06			
6.03	Brick work in cement mortar with 1st class brick including racking out joints and curing complete as directed in superstructure above plinth level up to 1st floor level (b) In prop. 1:4(cement:4sand)	Cum	195.26			
6.04	112mm thick 1st class brick nogged wall in cement mortar including racking out joints and curing complete as directed in super structure above plinth upto 1st floor (Protruding M.S. rod/Tor Steel of column to be embedded in cement mortar and will be measured and paid for separately) (a) In cement mortar in prop. 1:4	Sqm	367.12			
7.00	DOOR WORKS :					
7.01	Providing, fitting and fixing factory made Santro Flush door shutters having core & cross bands fabricated from seasoned 1st class timber, 25mm core battens, 2.5mm to 3.5mm uniformly thick cross bands, styles & rails made from hardwood timber of width not less than 50mm, fixed to the door frames (chowkath) with necessary hinges, screws, bolts etc. as specified and directed at all levels & glazing viewing is providing in door shutter as per drawing.(Door fixtures and fittings to be measured and paid separately) (ii) 35mm thick	Sqm	25.95			
8.00	PRESSED STEEL DOOR FRAME :					
8.01	Providing, fitting and fixing powder coated pressed steel door frame made of 1.25mm /1.6mm thick sheet of various sizes with necessary hinges jamb, lock jamb head and steel base ties at the bottom of the frame. The whole frame shall be welded or rigidity fixed together by mechanical means with base ties of pressed mild steel angle of size 20x20x1.25mm thick. Frame to be filled up with 1:4:8 P.C.C. after fitting the frame with brick / concrete works etc. complete as directed by the department for all levels. (PCC to be measured and paid separately) (a) 1.25mmthick sheet (i) Size 90mmx 60mm (Single rebate)	Rm	40.85			
8.02	MS ANGLE DOOR FRAME : Supplying, fitting and fixing door frame made of M.S. equal angle of size 40mmx40mmx5mm fabricated, welded, mitred and joined as per relevant I.S. Codes including fitting 8 nos. of M.S. hold fast, providing closing/ holding device for 2 nos. tower bolts of door for each side and 1 no. for fitting and fixing Aldrop (for single leaf) to the frame for fixing the door to the frame, applying primer to all steel surfaces fixing the frame to the wall/ R.C.C. members by embedding the hold fast securely in C.C. block of M-15 grade complete at all levels as specified and directed. (Door hinges to be paid as per relevant item of the schedule of rates).	Rm	35.40			
9.00	IRON AND STEEL WORK :					

9.01	Supplying, fitting and fixing in position reinforcement bars conforming to relevant I.S. Code for R.C.C. work/R.B. walling including straightening, cleaning, cutting and bending to proper shapes and length as per details, supplying and binding with 20G annealed black wire and placing in position with proper blocks, supports, chairs, spacers etc. complete.(for all level). b) ISI approved super ductile TMT Bar (I) TATA / SAIL	Qtl	451.21			
9.02	Providing, fitting and fixing M.S. grills/MS Tube of required pattern for windows/ clerstory /openings with M.S. flats at required spacing and frame all round, square or round M.S. bars with round headed bolts and nuts or screws. I. Plain Grill © Fixed to Brickwork/P.C.C./RCC	Kg	3412.34			
10.00	FLOORING :					
10.01	1. CERAMIC TILES A) AT FLOOR Providing Ceramic Tiles of approved quality, size, shape and thickness not less than 8 mm on floors, skirtings, treads and risers of steps over cement mortar bed 15 mm thick in prop. 1:3 (1 cement : 3 coarse sand) including cutting where necessary finished with flush pointing with Fix-A-Tile Choksey/Sika/Pedelite/Rouf) /white cement slurry mixed with approved pigment to match the shade of granite slab, complete at all levels as specified and directed. (Cement plastering to be measured and paid separately). (Coloured pigment should be in conformity with colour of slab and as approved and directed by the Department). a) Normal range (size 300mmx300mm and b) Johnson made	Sqm	41.34			
10.02	Providing Ceramic Tiles of approved quality, size, shape and thickness not less than 8 mm on floors, skirtings, treads and risers of steps over cement mortar bed 15 mm thick in prop. 1:3 (1 cement : 3 coarse sand) including cutting where necessary finished with flush pointing with Fix-A-Tile Choksey/Sika/Pedelite/Rouf) /white cement slurry mixed with approved pigment to match the shade of granite slab, complete at all levels as specified and directed. (Cement plastering to be measured and paid separately). (Coloured pigment should be in conformity with colour of slab and as approved and directed by the Department) a) Normal range (sizes 300mmx300mm and above) a) Orient made	Sqm	23.17			
10.03	Providing ANTISKID tiles of approved quality size, shape not less than 8mm on floor, skirting over a cement mortar bed 15mm thick of 1:3 (1 cement : 3 Coarse sand) approved make fix with Fix -A -Tile (Choksey/ Sika/ Pedelite/ Rouf)/ white cement					

	complete at all levels as specified and directed. CERAMIC TILES a) Normal range (Sizes 300mm x 300mm and above)	Sqm	12.93			
10.04	Providing polished ceramic wall tiles of approved quality, size, shape and thickness not less than 8mm on walls and skirtings over cement mortar bed 10mm thick in prop 1:3 (1 cement : 3 coarse sand) including cutting where necessary finished with flush pointing with Fix -A -Tile (Choksey/ Sika/ Pedelite/ Rouf)/ white cement slurry mixed with approved pigment to match shade of tiles complete at all levels as specified and directed. (cement plastering to be measured and paid separately) Coloured pigment should be in conformity with colour of tiles and as approved and directed by the Department). (Walls ,means both interior and exterior walls). a) Normal range (sizes 200mm x 200mm and above) (i) Orient made	Sqm	49.91			
10.05	65 mm thick cement concrete floor consisting of 53 mm under layer of cement concrete in prop. 1:3:6 (1cement : 3 coarse sand : 6 coarse aggregate of 25mm and down) and 12 mm thick wearing coarse of cement sand plastering in prop. 1:2 laid in panels and finished with a floating coat of neat cement finish (using cement slurry for bond @ 2.75 kg. per square metre of floor area) including curing etc. complete as directed.	Sqm	587.64			
10.06	Cement plaster skirting with cement mortar in prop. 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement including rounding of junctions with floor. (b) 20 mm thick.	Sqm	35.76			
10.07	40 mm thick cement concrete floor consisting of 25 mm under layer of cement concrete in prop. 1:3:6 (1cement : 3 coarse sand : 6 coarse aggregate of 12.5 mm and down) and 15 mm thick wearing layer in cement concrete in prop. 1:1:2 (1cement :1 coarse sand : 2 coarse aggregate of size 10mm down) finished with a floating coat of neat cement finish using cement slurry for bond @ 2.75 kg. per square metre of floor area , wearing layer is to be laid in panels including curing etc. complete as directed.	Sqm	11.22			
11.00	PLASTERING :					
11.01	10mm thick cement plaster in single coat on fair side of brick/concrete wall for interior plastering upto 1st floor level including arrises, and/or rounded angles not exceeding 80mm in girth and finished even and smooth including curing complete as directed. (a) In cement mortar 1:4	Sqm	2186.57			
11.02	15mm thick cement plaster in single coat on rough side of single or half brick wall for interior plastering upto 1st floor level including arrises, internal rounded angles,					

	not exceeding 80mm in girth and finished even and smooth including curing complete as directed. (a) In cement mortar 1:4	Sqm	1161.38			
12.00 12.01	WALL PUTTY : Providing two coats of Birla White Wall Care Putty (Water Resistant White Cement based putty for concrete/ mortar walls and ceiling both internal and external) after removing all loosely adhering material from the wall surface with the help of emery stone, putty blade or wire brush and moistening the wall with sufficient quantity of clean water as specified and directed by the department. (Total thickness of two coats is maximum 1.5mm) (i) Thickness = 1.5 mm thick	Sqm	3203.76			
13.00 13.01	PAINTING : Distempering two coats with oil bound distemper of approved brand and manufacture and of required shade on new wall surface to give an even shade, over and including a priming coat with alkali resistant primer of approved brand and manufacture after thoroughly brooming the surface free from mortar droppings and other foreign matter and also including preparing the surface even and sand papered smotg. (i) Priming coat with alkali resistant primer (ii) Top coat	Sqm Sqm	2144.42 2144.42			
13.02	a) Applying one coat of cement primer of approved brand and manufacture on new wall surface after thoroughly brooming the surfaces free from mortar droppings and other foreign matter and including preparing the surface even and sand papered smooth.	Sqm	1150.89			
	b) Finishing wall with water proofing cement paint of approved brand and manufacture and of required shade on new wall surface (two coats) to give an even shade after thoroughly brooming the surfaces to remove all dirt and remains of loose powdered material.	Sqm	1154.94			
13.03	Applying primary coat over new steel and other metal surface over 100mm in width or girth after preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and scoured with wire brushes, fine steels, wood scrapers and sand paper. (a) With ready mixed "red-lead/red oxide" primer.	Sqm	350.62			
13.04	Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand and manufacture (Asian paint/Berger paint/ICI paint/J&N paint/ Nerolac) to give an even shade including cleaning the surface of all dirt, dust and other foreign matter. (i) Surfaces over 100mm in width/girth. (a) General purpose (Asian paint/Berger paint/ ICI paint/J& K paint/Nerolac.)	Sqm	305.62			
13.05	Applying priming coat over new wood and					

	wood based surfaces over 100mm in girth/width after and including preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter, sand papering and knotting. (b) With ready mixed paint, wood primer (White)	Sqm	36.21			
13.06	Painting two coats(excluding priming coat) on new wood and wood based surface with enamel paint of approved brand and manufacture (Asian paint/Berge paint/ICI paint/J&K paint/ Nerolac) to give an even shade including cleaning the surfaces of all dirt, dust and other foreign matter sand papering and stopping. (i) Surfaces over 100mm in width/girth. (a) General purpose (Asian paint/Berger paint/ ICI paint/J& K paint/Nerolac.	Sqm	36.21			
14.00 14.01	ALUMINIUM WORKS : Providing, fitting and fixing anodised aluminium windows and ventilators of standard sections without horizontal glazing bars joints mitred and welded fitted with 6mmx3.15mm lugs 100mm long embedded in CC blocks 150mmx 100mm x 100mm in 1:3:6 mix including providing and fixing handles, frictions stays, joining cleat, bolting device, locking arrangement, spring catch as requird complete as specifid and directed for all levels.(Cement concrete to be measured and paid separately) a) side hung and Top hung windows and Ventilators. (l) 6 mm clear glass.	Sqm	74.37			
15.00 15.01	ROOFING : Providing Pre Painted Galvanized Iron Sheet Roofing (PPGi)(Dyna roof/Sathyam/Durakolor/Century Wells) at all levels including fitting and fixing with self drilling, self taooin screws completed. Polyester Coated Galvanised Steel Sheet Roofing (colour coated Polysteel roofing sheets)(Dyna Roof) at all levels including fitting and fixing ridging with self drilling,self tapping screws complete(Roof trusses,purlins etc. to be measured and paid separately). (iv) 0.60mm thick	Sqm	63.00			
16.00 16.01	ROOF TRUSS : Providing welding, fitting, fixing, hoisting and fixing of roof trusses with purlin, bottom runner etc. fabricated out of a combination of two or all of the following sections: (i) square hollow sections (SHS/RHS) (ii) rectangular hollow section and (iii) M.S. black-tubes conforming to relevant I.S. code 1161-1968 as per approved design and drawing including M.S. cleat, base plate, bolts and nuts which ever required, including that required for fixing the ceiling and one coat of red oxide Zinc Chromate primer to all steel surface etc. complete as directed as per specifications.	Qtl	7.09			

17.00	HARDWARE FITTINGS :					
17.01	Supplying, fitting, fixing anodised aluminum fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for screws including necessary aluminum screw etc. complete (anodised to bright natural Matt & satin finished)					
	(b) Tower bolt (i) 300mmx12mm	Each	34.00			
	© Door handles (iii) 150mm	Each	30.00			
	(d) pressure die casting 100mm(Godrej with handle – 6lever)	Each	11.00			
	(e) Door stopper with rubber stoper	Each	16.00			
17.02	ELECTRO COLOURED IRON FITTINGS Supplying, fitting, fixing electrocoloured iron fittings of approved make, reasonably smooth, free from sharp edges and corners, flaws and other defects and with counter sunk holes for wood screws including necessary screws etc. complete.					
	(g)Heavy type-MS butt hinges- 100mm x 75mm x pair 3.55mm	pair	39.00			
18.00	PLINTH PROTECTION AND DRAIN :					
18.01	Providing plinth protection with bricks flat laid in cement mortar 1:4 and finished with 15mm thick cement plaster in prop. 1:2 with a floating coat of neat cement finish.	Sqm	163.75			
18.02	Providing drain with brick work in cement mortar in prop. 1:4 with half brick thick side walls and 100mm thick C.C. (1:3:6) base over one brick flat soling including 15mm thick cement plastering in prop. 1:3 finished with a floating coat of cement slurry as directed with necessary shuttering for sides and earth work in excavation of foundation trenches and refilling the sides after completion of work etc. as specified. (ii) 300mm wide and average 250mm deep with bed slope 1 in 150 with initial depth of 100mm.	Rm	237.30			
19.00	PRE CONSTRUCTION ANTI-TREMITT TREATMENT :					
19.01	Pre construction anti - termite treatment at the bottom of foundation pits and walls on either side up to a height of 300mm from bottom of the excavation made for column plinth beam, wall, trenches etc. by applying the emulsion @ 5 (five) litres per square meter of the surface area before starting construction work (supplying of necessary tools and accessories by the contractor) as per the direction of the Department complete. a) with aqueous emulsion having concentration 1:19 with chloropiropose					

	solution (trichel or euivalent) and water, i.e. 1% solution.	Sqm	698.53			
20.00	ROLLING SHUTTERS :					
20.01	Providing and fixing in position collapsible M.S. shutters with vertical channels 20mmx10mmx2mm braced with flat iron diagonals 20mmx5mm size with top and bottom rail of T-iron 40mmx40mmx6mm with 38mm dia steel pulleys completed with bolts and nuts , locking arrangements , stoppers , handles inclding applying a priming coat of red lead paint.	Sqm	42.15			
21.00	SANITARY FITTING :					
21.01	Providing, fitting and fixing vitreous china pedestal type water closet (European type W.C pan 400 mm high) of Parryware / Hindware make with seat and lid, CP brass hinges and rubber buffers, 10 litre low level white china vitreous flushing cistern with fittings, CI/MS brackets, 40mm dia flush band with fittings including painting of fittings and brackets, cutting and making good the walls and floors wherever required. (a) White	Each	5.00			
21.02	Providing vitreous china wash basin of size 550mm x 400mm of Parryware make with CI/MS brackets, 32mm CP brass waste coupling of standard pattern C.P stop cock, CP brass chain with plug, PVC waste pipe including painting of fittings and brackets, cuttings and making good the walls wherever required. (a) White vitreous china wash basin of size 550mm x 400mm	Each	5.00			
21.03	Providing, fitting and fixing decorative mirror of Agmecco make colour CP frame complete as directed and specified. (a) Size 450mmx600mm	Each	5.00			
21.04	Providing, fitting and fixing towel rail of Sona make complete as specified and directed. (a) Acrylic towel rail	Each	5.00			
21.05	Providing, fitting and fixing C.P grating to the floors complete as directed and specified. (a) 100mm dia	Each	10.00			
21.06	Supplying fitting and fixing C.P. bib cock 15mm dia of approved brand directed and specified. (G.I & C.P pipes will be measured separately) (I) Essco make (Delux/Sumthing spl./Tropiucal) (b) Long body bib cock with wall flange	Each	5.00			
21.07	Supplying fitting and fixing chrome plated (C.P.) stop cock of approved brand and size as mentioned below as directed and specified. (G.I & C.P pipes will be measured separately) (V) Essco brand (b)15mm	Each	10.00			
21.08	Supplying fitting and fixing C.P pillar cock 15mm dia of approved brand as specified and directed. (I) Sona make (b) Heavy type	Each	5.00			

21.09	Providing, fitting and fixing C.P bottle trap, Agmeco make for basin etc. complete as directed and specified. (a) 32mm	Each	5.00			
21.10	Providing and fixing KITEC make Polythene-Aluminium-Polythene (PE-AL-PE) composite pressure pipes U.V stabilised with carbon black conforming to ASTM F-1282-1995 for water supply including clamps at 1 meter spacing, cuttings and making good the walls etc. (II) Concealed by chiselling or breaking brick wall/CC/RCC and making good to the damages. (a) 1216 (16mm OD) pipe (I) In exposed surfaces or in trenches. (e) 3240 (40mm OD) pipe	Rm Rm	52.75 82.00			
21.11	Supplying, fitting and fixing PVC pipes of 6kg/cm ² (Supreme/Prince) or other ISI approved including joining, fitting and fixing with clamps etc. as necessary complete at all levels including below G.L as directed and specified. a) In exposed surfaces or in trenches (ii) 110mm dia (ii) 75mm dia	Rm Rm	73.00 29.50			
21.12	Supplying and placing plastic cylindrical vertical closed top (PCVC) tank of Sintex/ Polycon/Patton make over the staging with manhole cover with locking and cleaning arrangement including providing pads of size as required for inlet and outlet pipes complete as directed. (A) 2000 litre capacity i) Sintex make	Each	3.00			

BOQ OF EXTERNAL WATER SUPPLY FOR BCPL & CISF TOWNSHIP , LEPETKATA , DIBRUGARH.

SL.NO	Description of Works	Unit	Qty	Rate		Amount
				Rate in Fig.	Rate in words	
1.00	EARTH WORK:					
1.01	Earth work in excavation for foundation trenches of walls, retaining walls, footings of columns, steps, septic tank etc., including refilling (return filling) the quantity as necessary after completion of work, breaking clods in return filling, dressing, watering and remaining etc. and removal of surplus earth with all lead and lifts as directed and specified in following classifications of soils including bailing out water where necessary as directed and specified. (A) Upto a depth of 2.00m below the existing ground level. (a) In ordinary Soil	Cum	143.97			
2.00	P.C.C WORK:					
2.01	Plain cement concrete works with coarse aggregate, of sizes 13mm to 32mm in foundation bed for footing, steps, walls, brick works etc. as directed and specified					

	including dewatering if necessary, and curing complete (shuttering where necessary shall be measured and paid separately) (a)In prop. 1cement: 3 sand: 6 coarse aggregate by volume.	Cum	9.99			
3.00 3.01	PRE CAST SLAB: Providing precast RCC slab over drain, Septic tank etc. in proportion 1:2:4 reinforced with 10mm for bar @ 150 C/C both ways tying with 20gauge black annealed wire with necessary shuttering, curing etc. complete including fixing in position as directed. a)100mm thick slab	Sqm	79.69			
4.00 4.01	SHUTTERING AND FORM WORK: Providing form work of ordinary timber planking so as to give a rough finish including centering, shuttering, strutting and propping etc., height of propping and centering below supporting floor to ceiling not exceeding 4.0m and removal of the same for in-situ reinforced concrete and plain concrete work in. (a)Foundation, footing, base of columns, pile cap, raft and mass concrete works etc. (l)Using 25 mm thick plank	Sqm	28.56			
5.00 5.01	BRICK WORK: Providing brick soiling in foundation and under floor with stone/best quality picked jhama bricks, sand packed and laid to level and in panel after preparing the sub-grade as directed including all labour and materials, and if necessary dewatering, complete. (a)Brick on flat soiling	Sqm	99.96			
5.02	Brick work in cement mortar with 1st class brick including racking out joints and dewatering if necessary, and curing complete as directed in sub-structure upto plinth level. (a)In prop. 1:4	Cum	58.65			
6.00 6.01	PLASTERING: 15mm thick cement plaster in single coat on rough side of single or half brick wall for interior plastering upto 1st floor level including arrises, internal rounded angles, not exceeding 80mm in girth and finished even and smooth including curing complete as directed. (a)In cement mortar 1:4	Sqm	245.01			
7.00 7.01	CEMENT PUNNING: Providing a coat of neat cement slurry for bond @ 2.75kg of cement per Sq.m to be laid in panels including curing complete as directed.	Sqm	245.01			

10.00	VALVES: Supplying fitting and fixing check valve (non return valve) including thread to pipes.					
10.01	GATE VALVE					
a	50MM DIA	Each	33.00			
b	65MM DIA	Each	6.00			
c	80MM DIA	Each	11.00			
d	100MM DIA	Each	1.00			
e	150MM DIA	Each	1.00			
10.02	SLUICE VALVE					
a	50MM DIA	Each	3.00			
b	65MM DIA	Each	2.00			
c	80MM DIA	Each	9.00			
d	150MM DIA	Each	1.00			
10.03	DRAIN VALVE					
a	50MM DIA	Each	1.00			
b	65MM DIA	Each	2.00			
c	80MM DIA	Each	2.00			
10.04	AIR RELEAS VALVE					
a	50MM DIA	Each	1.00			
b	65MM DIA	Each	1.00			
c	80MM DIA	Each	8.00			
10.05	FIRE HYDRENT					
a	50MM DIA	Each	1.00			
b	65MM DIA	Each	1.00			
c	80MM DIA	Each	14.00			
11.00	PUMP SET:					
11.01	Supplying including fitting and fixing of water pump set centrifugal type complete with all accessories CC foundation proportion 1:2:4 jammed with MS nuts and bolts including DOL starter and making necessary connections etc as required complete. (k) 5 H.P. Three Phase (7 stage) with BE A 3175 KKTE	Each	2.00			
11.02	Supplying including installation of submersible type water supply motor pump set with all accessories including panel board on CC foundation of 1:2:4 jammed with MS nuts and bolts wire rope submersible cables without suction G.I pipe including making necessary connection etc as required complete. 5) 5 H.P Three Phase	Each	2.00			
11.03	Wiring for sub-main with insulated (ISI or approved) copper conductor flat 3 core cable for water pump set and submersible pump as directed by the department. a)2.5 sq.mm	Rm	150.00			

BOQ FOR OVER HEAD WATER TANK & SUMP FOR BCPL TOWNSHIP ,LEPETKATA , DIBRUGARH.

SL.NO	Description of Works	Unit	Qty	Rate		Amount
				Rate in Fig.	Rate in words	
1.00	EARTH WORK:					
1.01	Earth work in excavation for foundation trenches of walls, retaining walls, footings of columns, steps, septic tank etc., including refilling (return filling) the quantity as necessary after completion of work, breaking clods in return filling, dressing, watering and remaining etc. and removal of surplus earth with all lead and lifts as directed and specified in following classifications of soils including bailing out water where necessary as directed and specified. (A)Upto a depth of 2.00m below the existing ground level.					
	(a) In ordinary Soil	Cum	597.88			
1.02	Earth/ Sand filling in plinth in layer not more than 150mm thick including necessary,carriage,watering,rammingetc. complete as directed and specified including payment of land compensation, Forest Royalty, Sales Tax and other duties and taxes as may be necessary. (A) With silt (predominantly non plastic) by truck carriage including loading and unloading.	cum	10.57			
2.00	P.C.C WORK:					
2.01	Plain cement concrete works with coarse aggregate, of sizes 13mm to 32mm in foundation bed for footing, steps, walls, brick works etc. as directed and specified including dewatering if necessary, and curing complete (shuttering where necessary shall be measured and paid separately)					
	(a)In prop.1:3:6 1cement: 3 sand: 6 coarse aggregate by volume.	Cum	23.29			
2.02	Plain cement concrete floor base in prop. 1:3:6 laid in alternate bays as specified with coarse agg. of size 13mm to 32mm including dewatering if necessary, and curing etc. complete. (A) 50mm thick	sqm	28.26			
3.00	R.C.C. WORK :					
3.01	Providing and laying plain/reinforced cement concrete works with coarse sand & 20mm down graded stone aggregate including dewatering if necessary, and curing complete but excluding cost of form work and reinforcement for reinforced cement concrete work (form work and reinforcement will be measured and paid separately.)					

	(I) Using mixture machine (A) In sub-structure upto plinth level. - Foundation, footings, columns with base tie and plinth beam, pile cap, base, slab, retaining walls, walls of septic tank, inspection pit and the like and other works not less than 100mm thick up to plinth level. (a)M25 grade concrete (b)M20 or prop. 1:1.5:3	cum cum	101.63 114.6			
3.02	(B) In superstructure from plinth level to 1st floor level. (a) Columns, pillars, posts, struts, suspended floor, roof, landing, shelf and support, balcony, lintel, sill band, beam, girder,bressumer, cantilever, staircase (except spiral stair case and landing) including preparing the top surface and finishing of nosing. (i) M25 grade concrete	cum	203.95			
	(a)Columns, pillars, posts, struts, suspended floor, roof, landing, shelf and support, balcony, lintel, sill band, beam, girder,bressumer, cantilever, staircase (except spiral stair case and landing) including preparing the top surface and finishing of nosing. iv) On domes, vaults and shell roof (c) M25 grade concrete	cum	61.67			
3.03	Extra for each subsequent floor or part thereof above the 1st floor level. 1st to 2nd Level 2nd to 3rd Level 3rd to 4th Level 4th to 5th Level 5th to 6th Level 6th to 7th Level 7th to 8th Level	Cum Cum Cum Cum Cum Cum Cum	22.09 22.09 22.09 22.09 16.77 16.77 16.77			
4.00	SHUTTERING AND FORM WORK:					
4.01	Providing form work of ordinary timber planking so as to give a rough finish including centering, shuttering, strutting and propping etc., height of propping and centering below supporting floor to ceiling not exceeding 4.0m and removal of the same for in-situ reinforced concrete and plain concrete work in. (a)Foundation, footing, base of columns, pile cap, raft and mass concrete works etc. (i)Using 38 mm thick plank (ii)Using 25 mm thick plank	Sqm sqm	69.78 501.28			
4.02	Vertical surface such as walls (any thickness), parapet walls, partitions, walls of septic tank, inspection pit and the like including attached pilasters, buttresses, plinth and string courses and the like. (i) Using 38 mm thick plank	sqm	864.85			
4.03	Extra for each subsequent 1.0M height or part thereof beyond the initial height of 4.0M as mentioned in item no. 3.1.1					

	1st to 2nd Level 2nd to 3rd Level 3rd to 4th Level 4th to 5th Level 5th to 6th Level	sqm sqm sqm sqm sqm	144.14 144.14 144.14 144.14 144.14			
4.04	(E) Sides and soffits of Beam, beam hunchings, cantilever, girders, bressumers, lintels and horizontal ties. (a) For depth exceeding 1.0M.	sqm	76.96			
4.05	Extra for each subsequent 1.0M height or part thereof beyond the initial height of 4.0M as mentioned in item no. 3.1.1 1st to 4th Level 4th to 5th Level 5th to 6th Level	Sqm sqm sqm	14.73 27.95 27.98			
4.06	(F) Flat surface such as soffits of suspended floors, roofs, landings, cantilever slabs, chajjas, balconies and the like. Floors, etc. above 200mm in thickness (Using 38mm thick plank).	sqm	56.05			
4.07	Extra for each subsequent 1.0M height or part thereof beyond the initial height of 4.0M as mentioned in item no. 3.1.1 1st to 4th Level	sqm	56.05			
4.08	(G) Staircase with sloping or stepped soffits including risers and stringers but excluding landing. (Using 38mm thick)	sqm	87.59			
4.09	Extra for each subsequent 1.0M height or part thereof beyond the initial height of 4.0M as mentioned in item no. 3.1.1 1st to 2nd Level 2nd to 3rd Level 3rd to 4th Level	sqm sqm sqm	21.90 21.90 21.90			
4.10	(H) Domes, Vaults and shell roofs having curved surface in both directions (only area of the underside shall be measured for payment). (a) Using 38mm thick plank.	sqm	115.56			
4.11	Extra for each subsequent 1.0M height or part thereof beyond the initial height of 4.0M as mentioned in item no. 3.1.1 1st to 4th Level 4th to 5th Level	sqm sqm	46.13 69.43			
5.00 5.01	BRICK WORK: Providing brick soiling in foundation and under floor with stone/best quality picked jhama bricks, sand packed and laid to level and in panel after preparing the sub-grade as directed including all labour and materials, and if necessary dewatering, complete. (a) Brick on flat soiling	Sqm	304.52			
6.00 6.01	IRON AND STEEL WORK Supplying, fitting and fixing in position reinforcement bars conforming to relevant I.S. Code for R.C.C. work/R.B. walling including straightening, cleaning, cutting and bending to proper shapes and length as per details, supplying and binding with 20G annealed black wire and placing in position with proper blocks,					

	supports, chairs, spacers etc. complete.(for all level).					
	(A)TMT - Corrosion Resistant Steel (Fe-500) reinforcement bar	Qtl	378.083			
	(a)TATA / SAIL (b) ISI approved super ductile TMT Bar (l) TATA/SAIL	Qtl	80.31			
6.02	Providing, fitting and fixing M.S grill/railing of required pattern for windows/ clerestory windows/ opening with M.S flats at required spacing in frame all round, square or round M.S bars with round headed bolts and nuts or screws. (l) Plain Grill (A) Fixed to Brickwork/ PCC/ RCC	Kg	1694.09			
7.00 7.01	FLOORING : 40mm thick cement concrete floor consisting of 25mm under layer of cement concrete in prop, 1:3:6 (1 cement :3 sand :6 coarse agg. of 12.5mm and down) and 15mm thick wearing layer in cement concrete in prop. 1:1:2 (1 cement :1 sand :2 coarse agg. of size 10mm down) finished with a floating coat of neat cement finish using cement slurry for bond @2.75 kg. per square metre of floor area, wearing layer is to be laid in panels including curing etc. complete as directed.	sqm	28.26			
8.00 8.01	PLASTERING: 15mm thick cement plaster in single coat on rough side of single or half brick wall for interior plastering upto 1st floor level including arrises, internal rounded angles, not exceeding 80mm in girth and finished even and smooth including curing complete as directed. (a) In cement mortar 1:3 (b) In cement mortar 1:4	sqm sqm	1072.45 652.49			
8.02	Extra for interior plastering above 1st floor level for every addl floor or part thereof including curing complete as directed. (A) Single coat plaster 1st to 2nd Level 2nd to 3rd Level 3rd to 4th Level 4th to 5th Level 5th to 6th Level 6th to 7th Level 7th to 8th Level	sqm sqm sqm sqm sqm sqm sqm	63.11 63.11 63.11 63.11 83.84 83.84 83.84			
9.00 9.01	BIRLA WALL PUTTY: Providing two coats of Birla White Wall Care Putty (Water Resistant White Cement based putty for concrete/ mortar walls and ceiling both internal and external) after removing all loosely adhering material from the wall surface with the help of emery stone, putty blade or wire brush and moistening the wall with sufficient quantity of clean water as specified and directed by the department.					

	(Total thickness of two coats is maximum 1.5mm)					
	(i) Thickness = 1.5 mm thick	sqm	560.05			
10.00	PAINTING :					
10.01	Applying one coat of cement primer of approved brand and manufacture on new surface to give an even shade after thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth.	sqm	560.05			
10.02	Finishing wall with water proofing cement paint of approved brand and manufacture and of required shade on new wall surface (two coats) to give an even shadeafter thoroughly brooming the surfaces to remove all dirt and remains of loose powdered materials.	sqm	560.05			
10.03	Applying primary coat over new steel and other metal surface upto 100mm in width or girth after preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and scoured with wire brushes, fine steels, wood scrapers and sand paper. (A) With ready mixed "red-lead/red oxide" primer.	sqm	77.14			
10.04	Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint of approved brand and manufacture (Asian paint/Berger paint/ ICI paint/J&N paint/ Nerolac) to give an even shade including cleaning the surface of all dirt, dust and other foreign matter. (A)Surfaces upto 100mm in width/girth. (a)General purpose (Asian paint/Berger paint/ ICI paint/J&N paint/Nerolac).	Sqm	77.14			
11.00	WATER PROOFING:					
11.01	Dr. SEALKIT SEALCRETE Providing, fitting and fixing an acrylicbased polymer modified cementitious composite coating system. Polymer in conjunction with cement provides properties to combat the shortcomings of cement, particularly its poor adhesion properties, low impact strength, low flexural strength mid thin section fragility. Dr. SEALKIT SEALCRETE polymer aids to the potential use as well as enhances the properties of cement, slurry, mortar, concrete making them excellent choice for use in new as well as renovation work. (a)Application It is applied in Two Coats, The Chemical is mixed with neat Cement in the ratio 1:2. The Second Coat can be applied after the First Coat min 4-5 hours later. After the application of Two Coats, a protection layer (plaster - Cement, sand and water) has to be provided.					

	Dr. Sealkit NSPG Providing, fixing and fitting a Non-Shrink polymeric waterproofing Grouting compound. It is specially formulated non-shrink polymeric compound for injection cement Grouting. It is a free flow powder for addition to neat cement-water milk. Its strong plasticizing properties allowing the mix for substantial reduction in water content without affecting the fluidity, thus improving the strength and impermeability of the grout. During the setting period of the grout, it produces controlled expansion to compensate the normal plastic shrinkage of cement. This ensures complete filling of voids and prevent formation of porous sections. Due to its surface active property and volume increase during reaction, even the smallest cracks and pores can be impregnated. (a)Application 500mm centre to centre hole has to be created by a drill machine. The depth of the hole in general is 30-35% of the thickness of the RCC structure. Dr. SEALKIT NSPG is admixed with neat cement milk consistency and injected under pressure preferably by a positive displacement pump through nozzles. The surface of the concrete should be properly sealed to prevent the grout from coming out. Dr. SEALKIT NSPG should be mixed uniformly with dry cement. As water is reduced around 10-15% the strength of the grout increases. Once the grout is made, it produces high fluidity. The grout should be used within 30 minutes from the time of production.	sqm	608.31			
12.00 12.01	ALUMINIUM WORKS: Aluminium windows and ventilators: Providing, fitting and fixing anodised aluminium windows and ventilators of standard sections without horizontal glazing bars joints mitred and welded (manufactured to relevant IS specifications) fitted with 6mm x 3.15mm lugs 100mm long embedded in CC blocks 150mm x 100mm x 100mm in 1:3:6 mix including providing and fixing device, locking arrangement, spring catch as required complete as specified and directed for all levels.(Cement concrete to be measured and paid separately) (A)Side hung and Top hung windows and ventilators. (a) 5 mm frosted glass.	sqm	1.28			
12.02	ALUMINIUM LADDER: Providing fitting and fixing of aluminium ladder of 450mm wide inside the water tank for cleaning purpose including all necessary arrangement for lifting or hanging all complete.	Rm	4.50			

18.00	C.I MANHOLE COVER:					
18.01	Providing fitting and fixing 450mm dia 90mm thick C.I Man hole cover and frame of 58Kg. Weight complete as directed and specified.	each	2			

ELECTRICAL BOQ OF SECURITY OFFICE FOR BCPL, SUBSTATION FOR BCPL, SUBSTATION FOR CISF, TELECOM/IT EQUIPMENT ROOM FOR BCPL, PUMP HOUSE FOR BCPL AT LEPETKATA, DIBRUGARH.

SL.NO	Description of Works	Unit	Qty	Rate		Amount
				Rate in Fig.	Rate in words	
1.00	Wiring for light point/fan point with 1.5 sq mm insulated (ISI marked)HFFR Copper Conductor Cable in recessed P.V.C conduit, 2.0 mm thick of required size with ceiling rose, without switch and switch board as directed by the department .					
	a) Short point up to 3.00 mtr length	Per point	8			
	b)Medium point upto 6.00 mtr Length	Per point	34			
	c)Long point upto 10.00 mtr length	Per point	29			
	d)Extra Long point upto 15.00 mtr length	Per point	19			
2.00	Wiring for sub - main with insulated (ISI or approved) HFFR Copper Coductor Cable single core in recessed coduit, 2.0 mm thick with earth continuity as directed by the department. .					
	a) 2 x 2.5 sq mm + 1x 2.5 sq mm with 20 mm dia, 2.0 mm thick rigid PVC pipe.	M	450			
	b) 2 x 4.00 sq mm + 1 x 2.5 sq mm with 20 mm dia, 2.0 mm thick rigid PVC pipe.	M	120			
	c) 2 x 6.00 sq mm + 1 x 2.5 sq mm with 20 mm dia, 2.0 mm thick rigid PVC pipe.	M	145			
3.00	Supplying including and fixing of metal boxes in recessed system complete as					
	per direction of department					
	a) 1-3 module flush type	each	25			
	b) 4-5 module flush type	each	1			
	c) 6-8 module flush type	each	6			
	d) 12 module flush type	each	5			
4.00	Supplying including fitting fixing of logic front plate of suitable colour as per direction of department					
	a) 1 module	each	4			
	b) 2 module	each	4			
	c) 3 module	each	17			
	d) 4 module	each	1			
	e) 6 module	each	4			
	f) 8 module	each	2			
	g)12 module	each	5			

5.00	Supplying with fitting and fixing sheet steel, phosphated, powder painted Double door surface mounting SPN MCB DB (IP-43 protection) incorporated with bus-bar, Neutral link, Earth Bar and din rail etc fitted on wall with grouting nuts & bolts as reqd. Co					
	a) 8 Way	each	2			
	b) 12 Way	each	3			
6.00	Supplying with fitting and fixing panel mounting open execution 25ka 415V 50Hz 4P(Ics=Icu,adjustable Ir setting 0.7-1)(without enclosure)of the following capacity complete with making necessary connection as specified with making necessary connection as specified and directed by the deptt.					
	a)40A	each	5			
	a)63A	each	2			
7.00	Supplying with fitting and fixing Single pole 10KA 240/415V 50Hz MCB of the following capacity complete with necessary connection as specified and directed by the deptt.					
	a) 6A	each	9			
	b) 20A	each	4			
	c) 32A	each	3			
8.00	Supplying with fitting fixing 6 amp one way modular clip in switch in recessed system including making necessary connection complete as per direction of department	each	100			
9.00	Supplying and laying of following sizes XLPE insulated and PVC sheathed 1.1KV grade aluminium conductor LT armoured U.G. cable laid in ground/partially in air (10% of cable length) including excavation of cable trench upto depth of 75cm, refilling, protective brick covering, sand cushioning etc complete handling of surplus soil, debries etc. to proper place as specified and directed by the department.					
	a) 6 sq. mm. 4 core U.G. Cable	RM	115			
10.00	Supplying including installation of socket outlet 6/16 amps 3/5 pin combine shuttered complete as per direction of department	Each	14			
11.00	Supplying with fitting and fixing of Exhaust fan in the existing hole on the wall of following sweeps and making necessary connections etc.as directed by the department.					
	a) i) 225/230 mm sweep	Each	9			

12.00	Supplying, installation, testing and commissioning of the following prewired CFL/Flourescent luminaries complete withall accessories such as ballast,starter etc directly on wall/ceiling including connection with 1.5 sq mm PVC insulated core copper conductor as required and as directed by the deptt.					
	a)[i] LPF Striplite luminaries complete with copper ballast and 1 * 36/40 watt. Flourscent tube.(Philips make) Model - TMS - 101/140 Superlite	Each	30			
13.00	Supplying with fixing and decorative single wall bracket with all accessories with 9/11 W ecotone saver lamp fitted on laminated top cover M.S. board in recessed system including making necessary connection as specified and directed by the department	each	10			
14.00	Supplying with fitting and fixing of Ceiling fan on the wall of following sweeps and making necessary connections etc.as directed by the department.					
	a) 1200mm	each	12			
15.00	Supplying including fitting fixing of Electronic STEP Type Regulator for Ceiling fan complete with all all connection in exhistng board as required complete as directed by the department.	each	12			
16.00	Supplying including fitting fixing of Swing wall fan complete with all accessories and making necessary connections etc. as required complete and as directed by the department.					
	a) 400 mm sweep	each	1			
17.00	Supplying including fitting and fixing of the following luminaries complete with all accessories and making necessary connection with 1.5 sq. mm. PVC insulated multistrand copper conductor as required and directed by the department.					
	a) Bulkhead fittings complete with toughened frosted glas and 1x60W GLS lamp (Philips make, model-nxc101)	each	2			
	b) Post top lantern complete with all accessories, and elliptical/conical cover with 1x70W HPSV lamp SPC 101/102/104/70(E) (Phillips make)	each	2			
	c) Flood Light Luminaries with 1x500W Halogen Lamp (Phillips make, model-QVF 135/500)	each	13			

18.00	Supplying, installation testing and commissioning of the following prewired CFL/Flourescent luminaries complete with all accessories such as ballast, starter etc. directly on wall/ceiling including connection with 1.5 sq. mm PVC insulated multistand copper conductor as reqd. and as directed by the department.					
	a) Box Type Luminaries with copper ballast and 2x36W Flourescent tube. (Phillips Make)	each	17			
19.00	GI pipe Electrode Earthing Station :					
	Supply, assembling ,installing testing and commissioning with all the items for constructing GI pipe earthing station. The earthing station comprises of one number B class GI earthing pipe size 40 mm x 5 mm thick (minimum 4.5 mtr deep) GI funnel with stainless steel hinged door on steel frame (300 x 300 mm) to cover up the watering pit , 50 kg common salt ,100 kgs of fine charcoal powder ,earthing conductor size 25 mmx 3 mm GI flat from pipe to the ground level ,required hardware and miscellaneous items . The work involves digging pit on the soil ,burying the earth electrode in the mixture of common salt and charcoal , connecting earthing conductor to earthing electrode , backfilling the soil and constructing the watering pit at the site as specified and detail as per this document and sketch attached.	nos	3			
20.00	Earthing Conductors					
	Supplying, straightening, shaping, laying under ground/ laying on a cable tray/ laying in cement concrete trench the following sizes of hot dipped galvanized iron conductor. The work is inclusive of providing clamping with the trays/ on the sides of the trenches, making joints where ever required and providing the hardwares and the terminating the hardwares and the termination to the equipment/ earthing station/ etc.,					
	8 SWG G.I. wire	Mts	60			
	25 mm x 3 mm GI flat	Mts	12			
21.00	Lightning Arrester					
	Providing and fixing of lightning conductor finial made of 25mm dia 300mm long G.I. tube having single prong at top with 85 mm dia. 3mm thick G.I. base plate including making hole and fitted with necessary 6mm dia rag bolts and nuts.	each	6			

GRAND TOTAL in Rs.

Rupees in Figure.....

Rupees in Words.....

VOLUME – 2 (Technical Part)

External Water Supply at BCPL and CISF Township, Overhead and Under Ground Water Tank, Pump House, Security office and Telecom / IT Equipment room at BCPL Township and Substation at BCPL and CISF Township FOR M/s BRAHMAPUTRA CRACKER & POLYMER LIMITED, AT LEPETKATA, DIBRUGARH, (ASSAM)

TENDER NO: BCPL/DIB/C&P/SER/20120125/MD

(CIVIL WORKS)

1.0 SCOPE OF WORK:

The scope of work envisaged under this tender covers includes

Name of Work:

External Water Supply at BCPL and CISF Township, Overhead and Under Ground Water Tank, Pump House, Security office and Telecom / IT Equipment room at BCPL Township and Substation at BCPL and CISF Township FOR M/s BRAHMAPUTRA CRACKER & POLYMER LIMITED, AT LEPETKATA, DIBRUGARH, (ASSAM) as per tender specifications, drawings and standards etc. In general job shall be done as per APWD specifications. However brief specifications are given here under for general guidance purpose of the tender. The job scope includes casting of footings / piling work as per drawings, and all other building activities including civil / sanitary / plumbing / electrical works as spelt out in the detailed drawings and specifications. It shall be clearly be noted that the bidders are required to give their item rates taking into consideration all aspects as per site requirements and drawings/specifications enclosed along with this tender document. Quoted offers shall be inclusive of all materials and labor .Water and Power shall have to be arranged by the contractor for execution of the tendered work. The contractor shall be responsible to complete the entire work in all respects and any other works necessary to complete the job though especially not covered in the scope of work. In general, the scope of work covers the following but not limited to:

- Anti-termite treatment as per APWD to be executed by reputed party (Licensed holder)
- Earth work in excavation in all kinds of soils and in all lead & lift.
- Filling with surplus excavated earth.
- Filling with selected earth brought from outside at any lead & lift.
- Providing and filling silt earth / sand under floor in foundation.
- Providing and laying 1:3:6 (1 cement: 3 coarse sand: 6 graded stone agg; 40mm nominal size) concrete in foundation bed.
- Providing cast in situ reinforced cement concrete piles of M25 grade of concrete of design mix of required bore diameter, lengths as per drawing.
- Routine load test as per relevant IS codes.
- Providing and laying design mix of concrete grade M25 including steel/ply wood shuttering with steel/timber centering propping and scaffolding as per drawings.
- Providing cutting bending and placing steel reinforcement as per detail structural drawings.
- Providing and laying brick work in CM 1:4 (1 cement: 4 coarse sand) in foundation Strength of the bricks should be 75 class designation.
- Providing and laying damp proof course with application of two coats of polymer modified coating with a single component 100% acrylic polymer mastercrete M-81 of choksey chemicals to be mixed with OP cement in the ratio 1:2 over the PCC work of ratio 1:1.5:3 (1cement: 1.5coarse sand: 3graded stone of 10mm down nominal size)
- Providing and laying brick work in CM 1:4 (1cement: 4 coarse sand) in superstructure Strength of the bricks should be 75 class designation.
- Providing drip course (bulging) on all external projected slabs and chajjas.
- Providing 10mm cement plaster of mix 1: 4 (1 cement: 4 fine sand) on fair side of brick/concrete surface.

- Providing 6mm ceiling plaster in CM 1:4 (1 cement: 4 fine sand)
- Providing 15mm cement plaster of mix 1:4 (1 cement: 4 fine sand) on rough side of brick wall surface.

DOORS, WINDOWS/VENTILATORS:

- As per drawing and specification.
- Door frames – as per drawing and specification
- Windows and Ventilators shall be as per detailed specifications including provision of in built safety grills.

GENERAL REQUIREMENTS:

- Water proofing treatment in sunken slabs and flat roofs.
- Providing and fixing circular CI box for ceiling fan clamp.
- 400mm long 50mm-dia PVC waterspouts to be connected to RW pipe.
- High Density PVC rain water/sanitary pipe with all suitable jointly.
- Water supply in composite pipes as per drawing.
- Washable acrylic distemper as specified in the schedule of finishes over wall putty prepared surfaces.
- Enamel paint over wood /steel surfaces over a coat of approved quality primer.
- White washing of ceilings.
- Making plinth protection with PCC (1:2:4) over bricks flat laid in CM 1:4 and finished with 15mm thick cement plaster in prop. 1:2 with floating coat of neat cement finish.
- House drains as per drawings/specifications.
- All exposed MS members and woodwork to be painted with two coats of synthetic enamel paint over a coat of primer.
- All wood shall be kiln seasoned and chemically treated.
- Water proofing roof paint in R.C.C inclined surface.

FLOORING & PAVING:

- As per finishing schedule.

HARDWARE AND FITTINGS:

- 150mm long stainless steel handles with CP brass screws
- 200mm long stainless steel tower bolt with CP brass screws
- Stainless steel door stoppers
- Al drop with in built locking device.
- Stainless Steel ball bearing hinges 125X75X4mm.
- All hinges shall be fixed with CP brass screws.
- Mortise lock should be provided as per hardware drawing
- All window/ventilator panels shall be provided with fixtures such as stay & handles, for open able. The thickness of glass panes shall be 6mm. All toilet glass panes to be provided with frosted glasses.

SANITARY AND PLUMBING WORKS:

- European pattern W.C. with low level PVC flushing cistern as per drawing.
- Wash basin as per drawings. Wash basins to be provided with C.I. brackets.
- Glass shelves to be provided
- Mirror 600mmx450mm

- Providing CP soap tray in the Toilet.
- Towel ring 200mm dia and Towel rail –750mm long as per drawing
- Rain water pipe (PVC) – 150mm dia with necessary fittings like bends, tees, junctions floor traps, terminal guard etc. with pipe clips and joints as per requirements
- Floor trap with jalli in toilet, kitchen.
- PP – R pipes of required sizes for water supply network.
- PVC soil / waste water pipe (150mm dia,); vent pipe (75mm dia,) with necessary fittings like bends, tees, junctions floor traps, terminal guard etc. with pipe clips and joints as per requirements of sanitary scheme.
- Septic Tank with Soak pit, Inspection chambers, manholes, drainage pipes etc. as per drawings.

Water Main supply distribution system

- 3 – layer PP-R pipes with anti – Microbial layer
- IS - 15801

STANDARD/TECHNICAL SPECIFICATION

GENERAL INFORMATION:

1.1 GENERAL:

The work under this tender shall be executed strictly in accordance with the constructional and material requirements defined under these specifications. The Contractor shall carefully acquaint himself with these specifications to determine his contractual obligations for the work. The conditions of these specifications will be binding on the Contractor and no deviation shall be permissible unless specifically approved by the Consultant / Engineer – in – Charge in writing. In absence of any detailed specifications, these specifications, latest Indian Specifications and code of practice shall become applicable. Wherever the codes and specifications are silent then the same shall be governed by sound engineering practices and the decision of the Engineer – in – Charge / Consultant in matters of interpretation etc., shall be final and binding on the Contractor.

1.2 DRAWINGS / DIMENSIONS:

Figured dimensions on drawings shall supersede measurements by scale and drawings to a large scale take precedence over those to a smaller scale. Special dimensions in the specifications shall be checked on site. The dimensions where stated do not allow for wastage, laps joints etc., the levels. Measurement and other information concerning the existing site on the drawings are believed to be correct, but the contractor shall verify them for himself and also examine the nature of the ground as no claim or allowance whatsoever shall be entertained hereinafter on account of any errors or omissions in the levels or the description of the ground turning out to be different from what was expected or shown on the drawings.

1.3 CORRELATION OF DRAWINGS:

Before commencement of work, the contractor shall correlate all relevant structural, construction and services drawings and satisfy himself that the information available is complete and unambiguous. The contractor shall be responsible for any error / difficulty in execution / damage incurred owing to any discrepancy in the drawings which has been over looked by him and has not been brought to the notice of the Engineer –in – charge / Consultant before execution.

1.4 B.I.S CODES OF PRACTICE:

Wherever any reference is made in the specifications to any bureau of Indian Standard (IS) code of practice, it shall be understood to indicate the latest version of the code of practice in usage at the time of construction.

1.5 ASSESSMENT OF QUANTITIES IN LUMP SUM CONTRACT:

The bidders are advised to make their own assessment of the quantities based on the drawings and scope of work to arrive for the exact quantities. BCPL shall not be responsible for any omissions / errors made by the bidder in assessment of the actual quantities required for the execution of the lump sum

contract. Extra claim on account of the error made by the bidder in the assessment of the true quantities of the items of work shall not be entertained whatsoever.

SPECIFICATIONS

1.0 SPECIFICATIONS FOR EXCAVATION AND EARTHWORK:

1.1 SCOPE:

The scope of work broadly includes but is not necessarily limited to the following i.e. clearing of the site, excavation of foundation trenches, back filling, disposal of surplus earth as required including dewatering, shoring and strutting. Contractor shall provide all tools, labour, equipment and incidentals necessary required for completion of all aspects of work covered in these specifications.

1.2 TYPES OF SOIL:

Contractor shall thoroughly acquaint himself with the types of soil in excavation by an inspection of nature of the ground at site & scrutiny of the investigation details available with the Consultant.

1.3 CLEARING THE SITE:

The site on which the structure is to be built shown on the drawings and the area required for setting out and other operations like road, drains, sheds, etc. should be cleared and all obstructions, loose stones, materials and rubbish of all kinds, stump, brush wood and trees removed as directed, roots being entirely grubbed up. All useful materials obtained will be the property of the Engineer – in – charge and will be handed over to the Consultant. Rejected materials will be removed by the contractor to his own dump.

1.4 GROUND LEVELS AND SITE LEVEL PLAN:

Before starting the excavations, the requisite block levels of the entire plot shall be taken by the contractor in consultation with the consultant and a proper record of these levels to be kept, which shall be jointly signed by the Contractor and the Consultant. A block level plan showing all the ground levels of the plot shall be prepared and shall jointly be signed by the Contractor and the Consultant/Engineer-in-Charge.

1.5 SETTING OUT:

After clearing the site, and preparing the site level plan, the Contractor will set out the center lines of the buildings or other involved works and get the same approved from the Consultant.

It shall be the responsibility of the Contractor to install substantial reference marks, bench marks etc. and maintain them as long as required by the Consultant. The Contractor will assume full responsibility for proper setting out, alignment, elevation and dimension of each and all parts of the work.

1.6 EXCAVATION AND PREPARATION OF FOUNDATIONS FOR CONCRETING:

1.6.1 General:

Foundations trenches shall be dug wet or dry to the dimensions as shown on the drawings or as directed by the Consultant. The excavated materials shall be stacked at a sufficient distance away from the edge of the excavated pit so as not to endanger the stability of the sides. The soil heap shall not exceed more than 2m from the ground.

The Contractor shall, at his expense and without any extra charge, make provision for all shoring and strutting, extra excavation in slope, extra excavation in working space, dredging or bailing out water, and the excavation shall be kept free from water when the foundation work is in progress.

If the excavation is carried out to greater width, length or depth than specified, extra depth shall be made up by filling in lean concrete and extra length or width by filling in with earth rammed hard or by masonry as directed by the Consultant's. Cost of such extra excavation and the filling required therein as specified above shall be borne in full by the Contractor.

If required to protect the sides of the pits and trenches, timber shoring and strutting shall be erected. The timbering shall be closed or open depending on the nature of the soil and work, and arrangement of timbering including sizes and spacing of members used shall be as approved by the Consultant. NO EXTRA CHARGES shall be admissible on this account.

The bottoms of all excavation shall be trimmed and leveled in accordance with drawings / directions of the Consultant / Engineer-in-Charge. The bottoms of all excavation shall be rammed and wetted before

deposition of concrete. The Contractor shall report to the Consultant / Engineer-in-Charge when the excavation is ready to receive concrete. NO concrete shall be placed in foundations until the contractor has obtained the approval of Consultant / Engineer-in-charge.

1.6.2 PROTECTION:

All foundation trenches and similar excavations shall be strong, fenced and marked with red lights at night for watchmen to avoid accidents.

Adequate protective measures shall be taken to see that the excavation does not affect or damage adjoining structures. All measures required for the safety of the excavation, the people working in and near the foundation trenches, property and the people in the vicinity shall be taken care by the contractor at his own cost, being entirely responsible for any injury and damage to property caused by his negligence or accident due to his construction operations.

1.6.3 STACKING OF EXCAVATED MATERIALS:

Work for excavation shall include sorting out useful materials and stacking them on site as directed. Materials suitable and useful for back filling, plinth filling, leveling of the plot or other use shall be stacked convenient places, but not in such a way as to obstruct free movement of men, equipment and vehicles or encroach on the area required for constructional purposes.

1.7 BACKFILLING:

1.7.1 Earth obtained from excavation (or approved earth brought from outside for which no extra payment shall be made) shall be filled in layers as described in 1.7.3 around foundations and under floors. In case extra earth used for filling is required under floors, plinth protection including sit outs, courtyards, and the contractor will do at their own cost. The lumpsum offer shall be deemed to include the earth filling required under floors and plinth protection with plinth height shown in drawing above the bottom of the foundation concrete and finished courtyard level shown in Drawing below DPC coping level of the main building.

1.7.2 QUALITY OF FILLING:

Fill shall be well compacted, well graded earth or sand and shall be free from tree stumps, organic matter, seed and peat etc. Where earth or sand from source other than excavation at site is used, the quality of such earth or sand shall be the same as that obtained from excavation at site, or superior to it. Fine sand for filling is River Sand. Black Cotton soil shall not be used for back filling or plinth filling.

1.7.3 COMPACTION:

The fill shall be spread in layers not exceeding 20 cm thick and each layer shall be watered and thoroughly consolidated by suitable mechanical rollers, rammers, vibrators or other approved plant or system of compaction. The fill material shall be pulverized before depositing in place. Optimum moisture content shall be maintained for the filled materials. Compaction shall be done so as to achieve a dry density of not less than 90% of the maximum density obtained at optimum moisture content, except for the upper 20 cm layer which shall be compacted to a density of not less than 95% of the maximum density.

In order that the fill shall be reasonably uniform throughout, the material shall be dumped in place in approximately horizontal layers "Edge dumping", a process by which materials is pushed off edge of the fill and allowed to roll down the slope shall not be carried out. If there is traffic over the fill during construction, either by construction equipment or otherwise, it should be routed to make the compaction as uniform load shall be maintained and also care shall be taken to prevent any wedging action.

1.8 DE-WATERING:

Work for excavation shall include bailing or pumping out water which may accumulate in the excavation during the progress of work either from subsoil, seepage, springs, rain or any other cause and diverting surface flow if any by bunds or other means. Pumping out water shall be done in such approved manner as to preclude the possibility of any damage to the foundation trenches, Concrete or masonry of any adjacent structure. When water is met with in foundation trenches, pumping out water shall be from an auxiliary pit of adequate size dug slightly outside the building excavations. The depth of the auxiliary pit shall be more than the working foundation trench levels. The auxiliary pit shall be refilled with approved excavated materials after de-watering is over.

The excavation shall be kept free from water –

- 1) When Concrete/Reinforcement Work/water Proofing work is in progress.
- 2) Till the Consultant consider that concrete / mortar is sufficiently set.

1.9 SURPLUS EXCAVATED MATERIAL:

All excavated material certified as surplus and not useful, shall be removed by the Contractor from the site in an approved manner at his own cost and risk so as to indemnify the owner from any claims of any nature whatsoever.

1.10 CONTRACT SUM TO INCLUDE:

Apart from other factors mentioned elsewhere in this contract, the contract sum shall also include for the following:

- (a) Clearing site.
- (b) Setting out works, profiles etc. as required and setting up bench marks and other reference marks.
- (c) Providing shoring and strutting and subsequently removing the same.
- (d) Bailing and pumping out water as required and directed.
- (e) Excavation at all depths (unless otherwise specified in the drawings) and removal of all materials of whatever nature wet or dry and necessary for the construction of foundation etc. and preparing bed for laying concrete.
- (f) Sorting out useful excavated materials, transporting them beyond the structure and stacking them neatly on the site for back filling or reuse as directed.
- (g) Back filling the trenches alongside masonry or concrete with approved excavated material up to the natural ground level including watering and ramming.
- (h) Necessary protection (including labour, materials and equipment) to ensure safety against risk of accident.
- (i) Drilling small holes as directed to explore the nature of substratum if necessary.
- (j) Excavation of soft rock / hard rock if necessary.

2. SPECIFICATIONS FOR ANTITERMITE TREATMENT:

2.1 GENERAL:

Prevention of termite from reaching the super structure can be achieved by creating a chemical barrier between the ground and the building by treating the soil beneath and around the foundations.

The work shall be carried out as per IS 6313 part II of 2001 or latest edition.

This shall be provided to sides and bottom of trenches and footing including treating the backfill of foundations up to ground level and the vertical surface of wall, and filling of each under floor and treating the surface at ground level 900mm around the building.

2.2 MATERIAL:

Anti termite treatment, shall be carried out strictly in accordance with Assam PWD specifications using Chlordane (CP) an Emulsified concentrate @ 1% concentration or any other approved chemical.

2.3 PRE-CONSTRUCTION CHEMICAL TREATMENT:

This is a process in which chemical treatment is applied to a building in the early stage of its construction at the rate specified in IS 6313 part II of 2001 or the latest edition.

Hand operated pressure pump shall be used for uniform spraying of the chemical. To have proper check for uniform spraying of chemical graduated containers shall be used. Proper check should be kept that specified quantity of chemical is used for the required areas during the operation.

2.4 TIME OF APPLICATION:

Soil treatment shall start when foundation trenches and pits are ready to take lean concrete in foundations. Laying of lean concrete shall start when chemical emulsion has been absorbed by the soil and the surface is quite dry. Treatment should not be carried out when it is raining or the soil is wet with rain or sub soil water. The foregoing applies also in the case of treatment to the filled earth surface within the plinth before laying the sub grade for the floor.

2.5 DISTURBANCE:

The treated soil barriers shall not be disturbed after they are formed. If by chance, treated soil barriers are disturbed, immediate steps shall be taken to restore the continuity and completeness of the barrier system.

2.6 TREATMENT OF COLUMNPITS AND WALL TRENCHES:

- (a) The bottom surface and the sides (up to a height of above 300mm) of the excavation made for column pits and trenches shall be treated with the chemical at the rate specified in IS 6313 part II of 2001 or the latest edition.
- (b) After the column foundation and the wall foundation come up, the backs fill in immediate contact with the foundation structure shall be treated at the rate specified in IS 6313 parts of 2001 or latest edition of the vertical surface of the substructure for each side. If water is used for ramming the earth fill, the chemical treatment shall be carried out after ramming operation is done by prodding the earth at 150mm centers close to the wall surface and spraying the chemical with the above dose. The earth is usually returned in layers and the treatment shall be carried out in similar stages. The chemical emulsion shall be directed towards the concrete to masonry surface of the columns and walls so that the earth in contact with these surfaces is well treated with the chemical.
- (c) In the case of R.C.C framed structure with columns and plinth beams and R.C.C basement with concrete, mix is rich and dense (being 1:2:4 or richer), it is unnecessary to start treatment from bottom of excavation for columns and plinth beams. The treatment shall start at the depth of 500 mm below ground level. From this depth the back fill around the column, beams and R.C.C basement wall shall be treated at the rate as per IS 6313 part II of 2001 or the latest edition. The other details of treatment shall be as laid down in the clause (b) above.

2.7 TREATMENT OF TOP SURFACE OF PLINTH FILLING:

The top surface of the filled earth within plinth wall shall be treated with chemical emulsion at the rate as per IS 6313 part II of 2001 or latest direction (surface area) before the sand/sub-grade is laid. Holes up to 50 to 70 mm deep at 150mm centers both ways shall be made with crow bars on the surface of the soil with chemical emulsion.

2.8 TREATMENT OF JUNCTIONS OF WALL AND FLOOR:

To achieve continuity of the vertical chemical barrier on inner wall surface from the ground level, small channel 30 x 30 mm shall be made at all junctions of wall and columns with the floor (before laying the sub-grade) and rod holes made in the channel up to ground level 150mm apart and the chemical emulsion poured along the channel as per rate of application, mentioned in IS 6313 Part II of 2001 or the latest edition so as to soak the soil right up to bottom. The soil shall be tamped back into place after this operation.

2.9 TREATMENT OF SOIL ALONG EXTERNAL PERIMETER OF BUILDING:

During progress of work, provide hole in the soil with iron rods along the external perimeter of the building at intervals about 150 mm and depth 300 mm and filling these holes with chemical emulsion at the rate (as per IS 6313 part II of 2001 or the latest edition) per meter of perimeter of the external wall.

2.10 TREATMENT FOR EXPANSION JOINTS:

Anti termite treatment shall be supplemented by treating through expansion joints after the sub grade has been laid as per IS 6313 part II of 2001 or the latest edition.

2.11 TREATMENT OF SOIL SURROUNDING PIPE AND CONDUITS:

When pipes and conduits enter the soil inside the area of the foundations, the soil surrounding the points of entry shall be loosened around each such pipe or conduit for a distance of 150 mm and up to depth of 75 mm before treatment is commenced. When they enter the soil external to the foundations, they shall be similarly treated unless they stand clear of the walls of the building by about 75 mm for distance of over 300 mm from ground level.

2.12 SAFETY PRECAUTIONS:

All chemicals used for anti termite are poisonous and hazardous to health. These chemicals can have an adverse effect upon health when absorbed through skin, inhaled as vapors or spray mists or swallowed.

Person using or handling these chemicals should be warned of these dangers and advised that absorption through the skin is the most likely source of accidental poisoning. They should be cautioned to observe carefully the safety precautions given below:

These chemicals are usually brought to site in the form of emulsifiable concentrates. The containers should be clearly labeled and should be stored carefully so that children and pets cannot get at them. They should be kept securely closed.

Special care should be taken to prevent skin contact with concentrates. Prolonged exposure to dilute emulsions should be avoided. Workers should wear clean clothing and should wash thoroughly with soap and water, especially before eating or smoking. In the event of severe contamination, clothing should be removed at once and skin washed with soap and water, if chemicals splash into the eyes they should be flushed with plenty of fresh water and immediate medical attention should be sought.

The concentrates are oil solutions and present a fire hazard owing to the use of petroleum solvents. Flames should not be allowed nearby during mixing. Care should be taken in the application and present a fire hazard owing to the use of petroleum solvents. Flames should not be allowed nearby during the mixing.

Care should be taken in the application of chemicals to see that they are not allowed to contaminate wells or springs which serve as source of drinking water.

2.13 GUARANTEE:

The Contractor shall guarantee through a guarantee bond, the anti termite work for 10 years from the date of completion of project and shall indemnify the Engineer-in-charge against any defects that arise therein during the guarantee period as aforesaid. They shall immediately rectify, any defects that may occur therein, and repair all other damage occurring to any part of the structure on account of defect in Antitermite Treatment during the guarantee period of aforesaid.

2 SPECIFICATIONS FOR CAST – IN – SITU REINFORCED CEMENT CONCRETE:

3.1 GENERAL:

3.1.1 DESCRIPTION:

This section covers the requirements for finishing of cement concrete, proportioning, batching, mixing, testing, placing, compacting, finishing, jointing, curing and all other work as required for cast in place reinforced concrete. The contractor shall provide all the materials including cement, steel, labour, equipment, 'form work', scaffolding etc., required for completion of all reinforced concrete works as per drawings and documents. Cement concrete shall be composed of cement, fine aggregates, coarse aggregates, water with or without admixture as approved, proportioned and mixed as specified herein.

7.8.1 RELATED WORK SPECIFIED ELSEWHERE

- (a) Steel Reinforcement
- (b) Form Work

7.8.2 APPLICABLE CODES AND STANDARDS:

The codes and standards generally applicable to the work of this section are listed hereinafter.

IS	383	Coarse and fine aggregates from natural sources for concrete.
IS	456	Code of practice for plain and reinforced concrete.
IS	516	Methods of testing for strength of concrete.
IS	1199	Methods of sampling and analysis of concrete.
IS	1489	Portland – Pozzolana cement
IS	1838	Performed fillers in expansion joints in concrete non-extruding and resilient type

IS	1946	Code of practice for use of devices in walls, ceiling and floors of solid	Construction
IS	2389	Methods of testing of aggregates for concrete's	
IS	2505	Concrete vibrators, immersion type	
IS	2645	Integral cement water proofing compounds	
IS	3414	Code of practice for design and installation of joints in buildings	
IS	3558	Code of practice for use for immersion vibrators for consolidating concrete	
IS	4082	Recommendation on stacking and storage of construction materials	
IS	7861	Code of practice for extreme weather concretizing	
IS	7861	Recommended practice for hot weather (Part I) concretizing	
IS	8112	Ordinary Portland Cement (Grade – 43)	
IS	12269	Ordinary Portland Cement (Grade – 53)	

PART – I

The following clauses are intended to amplify the requirements of the reference document listed above and the contractor shall comply with these clauses.

3.2 SUBMITTALS:

3.2.1 Material Report:

Prior to start of delivery of materials required, the following shall be submitted by the contractor to the Consultant / Engineer – in – Charge for approval.

Suppliers and / or sources of all consumable materials including cement, steel, fine and coarse aggregates, water additives, bricks and timber etc.

Quality Inspection Plan to ensure continuing quality control of ingredients by periodic sampling, testing and reporting to the Consultant on the quality of materials being supplied.

3.3 PLANT & EQUIPMENT:

The Contractor shall submit the following to the Consultant well in advance.

The proposed program, methods and details of plant and Equipment for to be used to testing of ingredients and concrete samples.

The proposed programme methods and details of plant & equipment to be used for concrete work.

3.4 REPORTS FOR INSPECTION AND TESTING:

During concreting operations, the contractor shall conduct inspection and testing as described in **sub section 3.15.2 herein**, and all reports thereon shall be submitted in summary form to the Consultant / Engineer – in – Charge.

3.5 SCHEDULES:

Before commencement of the work the contractor shall prepare working schedules of concreting giving dates and rate of pour for each item of work and submit the same to the Consultant / Engineer – in – Charge for their approval.

3.6 MATERIALS:

Before bringing to the site, all materials for cement concrete shall be approved by the Consultant / Engineer – in – Charge. All approved samples shall be deposited in the office of the Consultant / Engineer – in – Charge before placing orders for the materials with suppliers. The materials brought on to the work shall conform in every respect of their approved samples.

Fresh samples shall be deposited with the Consultant / Engineer – in – Charge whenever type or source of any material changes. The contractor shall check fresh consignment of materials as it is brought on to the works to ensure that they conform to the specification and / or approved samples.

The Consultant / Engineer – in – Charge shall have the option to have any of the materials tested to find whether they are in accordance with specifications at the contractor's expense. All bills vouchers and test certificates which in the opinion of the Consultant / Engineer – in – Charge are necessary to convince him as to the quality of materials or their suitability shall be produced for his inspection when required.

Any materials which have not been found to the specification and not approved by the Consultant / Engineer – in – Charge shall be rejected forthwith and shall be removed from the site by the Contractor's at his own cost within the time stipulated by the Consultant / Engineer – in – Charge. The Consultant /

Engineer – in – Charge shall have the powers to cause the contractors to purchase and use materials from any particular source, as many in their opinion be necessary for the proper execution of work.

3.6.1 CEMENT:

Cement shall be provided by the Contractor

On the following types of cement as specified shall be used

- a) Ordinary Portland Cement 43 grade confirming to BIS 8112 – 1987
- b) Ordinary Portland Cement 53 grade confirming to BIS 12269 – 1987

Cement at site shall be stored in dry weather proof go-downs (or shed) built by the Contractor at his own costs in stacks which are not higher than 10 bags. The cement go-down shall be constructed as per CPWD specifications. The contractor shall conduct all necessary tests as specified in the IS, at his own cost to ascertain himself on quality of the material issued.

3.6.2 AGGREGATES:

- a) Aggregates from natural sources shall be in accordance with IS 383. The contractor shall submit to the Consultant / Engineer – in – Charge certificates of grading and compliance from the suppliers for all consignments of aggregates. In addition at site from time to time, the contractor shall test the aggregates in accordance with IS 2386 parts I, II, III and IV. The contractor shall allow for and provide all necessary apparatus for carrying out each test and for supplying test records to the Consultant.
- b) For fair faced concrete, the contractor shall ensure that aggregates are free from iron pyrites and impurities which may cause discoloration.
- c) The fine aggregates shall be river sand, stone dust or other approved sand. It shall be free from clay, loan, and earth or vegetables matter and from salt or other harmful chemical impurities. It shall be clean, sharp, strong angular and composed of hard siliceous material.

The grading of sand as determined by the method prescribed in IS 2386 part I shall be within the limits of grading zone III given below in Table I. When the grading falls outside the percentage limits given for sieves other than 600 micron, 300 micron and 150 micron (I.S) sieves by not more than 5 percent, it shall be regarded as falling within this zone. The 5 percent can be excess submission on one more sieves.

TABLE – I

FINE AGGREGATES

I.S. Sieve	Percentage passing for Grading			
	ZONE - I	ZONE - II	ZONE - III	ZONE - IV
10 mm	100	100	100	100
4.75 mm	90 – 95	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	35 – 60	80 – 100
300 micron	5 – 20	8 – 30	8 – 30	20 – 65
150 micron	0 – 10	0 – 10	0 – 10	0 – 15

The maximum quantity of silt as determined by the method prescribed in IS 2386 Part II shall not exceed 8%.

Stone dust shall be within the limits of Grading Zone III given in table – I. When the grading falls outside the percentage limits given for the sieves other than 600 micron and 300 micron (IS) sieves by not more than 5 percent and on 150 micron sieves by not more than 20 percent it shall be regarded as falling within this zone. The 5 percent can be excess summation on one or more services.

3.6.2.1 COARSE AGGREGATES:

The coarse aggregates shall be crushed stone or broken stone. Coarse aggregate obtained from crushed or broken stone shall be angular, hard, strong, dense, durable clean and free from soft, friable, thin, flat, elongated flaky pieces. The coarse aggregate should be from the approved source / quarry.

Coarse aggregate river shingle or pit gravel shall be rounded, sound hard, clean, non porous, suitably graded in size with or without broken fragments and free from flat particle of shale, clay, silt, loam and other impurities.

Except where it can be shown to the satisfaction of the Consultant that a supply of properly graded aggregate of uniform quality can be maintained over the period of the obtaining the coarse aggregate in different sizes & blending them in correct proportions as and when required.

The maximum size of coarse aggregate shall be such that the concrete can be placed without difficulty so as to surround all reinforcement thoroughly and fill the corners of form work.

3.6.3 WATER:

Water used in the works shall be potable water and free from deleterious materials. Water used for mixing and curing concrete as well as for cooling and / or washing aggregate shall be fresh and clean, free from injurious amounts of oil, salts, acids, alkali, other chemical and organic matter.

Water shall be from the source approved by the consultant / Engineer – in – Charge and shall be in accordance with clause 4.3 of IS 456.

Before starting any concreting work and whenever the source of water changes the water shall be tested for its chemical and other impurities to ascertain its suitability for use in concrete for approval of the Consultant. No waters shall be used until tested and found satisfactory. Cost of all such tests shall be borne by the Contractor.

3.6.4 ADMIXTURES AND ADDITIVES:

Chemical admixtures are not to be used until permitted by the Consultant / Engineer – in – Charge in case their use is permitted, the type, amount and method of use of any admixture proposed by the contractor shall be submitted to the Consultant for approval.

The contractor shall further provide the following information concerning each admixture to the Consultant / Engineer – in – Charge.

- (a) Normal dosage and detrimental effects, if any, of under dosage and over dosage.
- (b) The chemical names of the main ingredients in the admixture.
- (c) The chloride ion content, if any, expressed as a percentage by weight of admixture.
- (d) Whether or not the admixture leads to the entrainment of air when used in manufacturer's recommended dosage.
- (e) Where two or more admixtures are proposed to be used in any one mix, the manufacturer's written confirmation of their compatibility.

In reinforced concrete, the chloride ion of any admixture as determined in accordance with IS 6925 and the total chloride ion in all admixture used in concrete mix shall not exceed 0.30 percent by weight of cement.

The admixture when used shall conform to IS 9103. The suitability of all admixtures shall be verified by trial mixes.

The addition of calcium chloride to concrete containing embedded metal will not be permitted under any circumstances.

Regarding admixtures when used shall be based on ligno-sulphonates with due consideration to clause 5.2 and 5.30 of IS 7861.

Waterproofing admixtures shall comply with IS 2645.

3.7 PLANT:

The Contractor shall obtain the approval of the Consultant / Engineer – in – Charge for all plant items he proposes to use for the manufacture and placing of concrete.

The arrangement shall maintain all items of plant at all times in a clean and efficient working condition.

3.8 STORAGE:

All goods and products covered by this specification shall be procured well in advance and stored as specified below:

3.8.1 CEMENT:

Cement shall be stored on a raised floor in dry weather proof & dust free but well ventilated shed.

Cement bags shall be stacked close together away from external walls and in stacks of not more than ten bags to avoid lumping under pressure.

Cement stored during monsoons or cement expected to be in store for more than eight weeks shall be completely enclosed in 700 micron polyethylene sheet so arranged that the flap close on the top stack. The contractor shall ensure that protective polyethylene sheet is not damaged at any time during use.

Consignments of cement shall be used in order of delivery. A record shall be kept of the batch numbers of cement deliveries in such a form that the part of the works in which the cement is used can be readily identified. If during delivery or by test, the cement is found to be defective, the same shall be returned back forthwith.

The contractor shall be responsible for the storage of cement at the site and no claim will be entertained in the event of any damage occurring to cement due to faulty storage by the contractor or on account of his negligence.

Cement stored on site for a period longer than eight weeks shall be tested to the satisfaction of the Consultant / Engineer – in – Charge before it is used in the works. Cement that has failed the tests conducted shall not be used in the works and shall be remarked from the site immediately without fail.

3.8.2 STORING OF AGGREGATE:

Aggregate shall be stored on a suitable well drained raft of concrete, timber, metal or other approved material. The storage of aggregate on the ground will not be permitted.

Each size of aggregate shall be stored separately in such a manner as to prevent spillage and mixing of one aggregate with an adjacent aggregate. The dividing walls of any bins shall be of sufficient height and the aggregate shall be so deposited that a distance of 100 mm shall be left between the top of the division wall and any part of the aggregate stack.

When stacking piling, the aggregate shall not form pyramids resulting in segregation of different size particles. The stacks shall be regular and of a height not exceeding two meter.

3.9 GRADES OF CONCRETE:

The grades of concrete shall be in accordance with the following table. The grade of concrete to be used in each section of work will be shown in the drawings.

CHARACTERISTIC STRENGTH

Grade of Concrete	Characteristic strength i.e., compressive strength of 15 cm cubes at 28 days (N/mm ²)	Nominal maximum aggregate size (mm)
10	10	25
15	15	25
20	20	20
25	25	20
30	30	20
35	35	20

Unless otherwise specified in the drawings the maximum nominal size of coarse aggregate for different grades of concrete shall as under:

- | | | |
|-----|---|------|
| (a) | For concreting in very narrow space or in very small thickness. | 12mm |
| (b) | For all reinforced concrete work except in massive foundations. | 20mm |
| (c) | For all ordinary plain concrete and massive reinforced foundations. | 10mm |

3.10 WATER-CEMENT RATIO:

The water cement ratio shall be within 0.45 & 0.70 depending upon the workability.

3.11 WORKABILITY:

The workability of fresh concrete shall be such that the concrete is just suitable for the conditions of handling and placing so that after compaction, it becomes completely consistent and homogeneously surrounds all the reinforcement and completely fills the formwork.

The workability of fresh concrete at the place of mixing shall be measured by compacting factor test and at the place of disposition by means of slump test. During the finalization of trial mixes, the relationship between compacting factor and slump test shall be established for each grade of concrete as well as for various levels for workability.

Normally, in the condition of low water cement ratio as well as medium / high workability, the workability shall be achieved by increasing the cement content.

In case where the cement content is to be limited to reduce the heat of hydration, and the water cement ratio is also kept low to reduce the permeability or due to other requirements the desired workability may be achieved with the use of limited doses of plasticizer or air entraining agent. In such cases, the method of mixing and dosages of the plasticizer / air entraining agent shall be according to the manufacturer's specification and with the approval of Engineer – In - Charge.

Consistency and workability of the concrete shall be checked by measuring the slump of a truncated cone of concrete straight from the mixer under normal working conditions. The conical mould shall be of metal, 300mm high and 100mm and 200mm in diameter at top and bases respectively.

Moulds shall be prepared by the contractor. The slump range of concrete shall be as per the tabulation given below, as well as standards.

Slump test shall be performed as per IS 1881 at intervals established by the Engineer at the contractor's cost in such a way as to check that the degree of consistency established by the Engineer for work in progress is maintained. The table below gives a general slump range to be followed for various types of construction unless otherwise shown on drawings or instructed by the Engineer.

<u>Various types of Construction</u>	<u>Slump in mm</u>	
	<u>Maximum</u>	<u>Minimum</u>
Reinforced foundation walls and footings	80	35
Plain footings, caissons and structure walls	75	20
Compressor foundations and for heavy mass constructions	50	20
Pumps and other misc. equipments foundations	75	35
Columns, slabs, beams and reinforced walls	100	50

3.12 DURABILITY:

The durability of concrete, depending on the exposure condition, is to be taken into account while designing the mix. For given aggregates, the cement content should be sufficient to make sufficiently low water/cement ratio and Appendix A of IS 456 shall be taken as guideline for durability considerations.

3.13 TRIAL MIXES:

After approval of the mix design by the Engineer, the Contractor shall make in presence of the Engineer the trial mixes for each grade of concrete as well as required workability.

Before starting the trial mixes, necessary preparatory works like determination of sieve analysis of the aggregates, densities of different ingredients, moisture content in the aggregates, shall be completed according to the relevant BIS codes.

Each trial mix shall be handled and compacted by the method which the contractor proposes to use for that mix in the works and the mixes shall not show tendency of inadequate compaction by the method proposed.

The compacting factor and the slump of each trial mix shall be determined immediately after mixing and the values shall not exceed the maximum value obtained in the mix design.

Five (5) 150mm test cubes shall be made from each trial mix. These shall be cured and tested in accordance with relevant BIS codes. In order to have the specified characteristics strength in the field, the concrete mix as designed in the design mix shall have higher average compressive strength depending on the degree of quality of control at site.

Before commencement of the concreting works of particular grade of concrete, the contractor must complete the work of trial mixes and subsequent testing of the test cubes obtained there from the desire of the approved mix for that particular grade of concrete.

The entire cost of all trial mixes including all the preparatory work of trial mixes, preparation of test cubes and their testing shall be borne by the contractor.

3.14 NOMINAL MIX CONCRETE:

Nominal mix concrete may be used for all concrete of grade M-10 and below. If design mix concrete cannot be used for any reason for grade M-15 and M-20, nominal mix concrete may be used with the permission of the Engineer. Nominal mix concrete shall be in accordance with Table – 3 of clause 8.3 of IS 456. The stipulations of clauses 8.3.1 and 8.3.2 of IS 456 shall be taken into consideration.

3.15 VOLUMETRIC MIX CONCRETE:

Where concrete is specified in volumetric proportions such as 1:4:8, 1:3:6, 1:2:4, 1:1.5:3, 1:1:2 etc., in the bill of quantities, coarse and fine aggregates shall be measured by volume and cement by weight. The water cement ratio shall be within 0.45 & 0.70 depending upon the workability.

4.0 BRICKS:

- A) All bricks shall be of 75 class designation quality locally available as approved by the EIC.
- B) Bricks shall be of 225X113X75mm size or 250X125X75mm nominal size as specified in the item of work where no particular size is mentioned. Half brick wall shall be with 250X125X75mm size bricks and walls of one brick thick, bricks on end walls and brick flat paving may be done with either size of bricks.
- A) Bricks shall be well burnt, sound, hard with sharp edges of uniform size and shape free from cracks, stones or particles of lime and other defects, shall be kiln burnt and satisfy the following requirement :
 - a) They shall give a clear metallic sound when struck
 - b) They shall be of uniform colour and size
 - c) They shall not be cracked, stratified or under or over burnt
 - d) The tolerance in dimensions shall be +/- 12mm in length, 6mm in width and 3mm in height.
 - e) Keys or frogs shall be formed on one of the larger size, except in the case of machine extruded bricks where no frogs are required
 - f) The increase in weight when soaked in water for 24 hours shall not be more than 20% of the dry weight of the bricks.
- g) If required by the EIC necessary test shall be conducted at the contractor's expense to ensure quality. In general, the bricks shall be the best quality locally available.

4.1 Brick ballast :

Under burnt bricks shall not be used for making brick ballast. These shall be made from lump ballast or bats, Ballast that is brittle and easily crushed under beaters shall not be used.

4.1 BRICK WORK:

- a) 75 designation brick work shall consist of first class bricks laid in cement mortar and as hereinafter specified.
- b) No bricks may be used until after they have been soaked under water for at least one hour.
- c) Care must be taken that the bricks are perfectly clean and free from lime, moss or dirt of any kind. If necessary they must be scrubbed before use.
- d) Great care must be taken to masonry in progress of construction damp. When work is left off for the day troughs shall be formed, by means of fillets of mortar 51mm high all round the unfinished work and shall be kept filled with water. Vertical or inclined surfaces must be frequently watered from a rose headed can. Water should not be dashed with violence against new work as this washes out the mortar. Should the work be delayed owing to holidays or for other reason, the contractor must make adequate arrangements for keeping the work wetted, and shall continue to do so for at least ten days or such longer time as directed, after the brickwork has been completed.
- e) Brick work in cement mortar with 75 designation brick including racking out joints and curing complete as directed, in sub structure and superstructure in prop. 1:3.
- f) 112mm thick 75 designation brick nogged wall in cement mortar embedded with protruding M.S. rod 6mm dia in column including racking out joint and curing complete as directed in super structure above plinth in prop. 1:4.
- g) 112mm thick reinforced brick wall in prop. 1:5 reinforced with two lines of M.S. rods 6mm dia as specified embedded in 38mm thick concrete course in prop. 1:2:4 with coarse agg. 12mm down at every fourth course embedded with protruding rod in column including curing etc. complete as directed in super structure above plinth level.

5.0 FLOORING/SKIRTING/CLADDING:

a) Preparation of plinth filling :

All plinth fillings shall be properly consolidated in layers, watered, rammed and allowed to consolidate to the EIC's satisfaction before any flooring is laid. When the flooring is to be laid over a foundation of sand, broken stone or brick or a combination of sand and broken stone or brick the filling shall be removed to a depth equal to the thickness of the flooring plus such foundation layers.

b) Foundations :

i) Sub-layer of sand:

After the plinth filling has been prepared as detailed in specification above a sublayer of sand 300mm deep shall be laid watered and brought to an even surface.

ii) Layer of broken stone or brick:

Over the sand a foundation course of bricks shall be laid and the interstices filled in with sand. The bricks shall be tightly packed and laid so as to break joint.

c) Tile floors :

i) Foundation and cement floating under tiles :

Over the foundation as in (b) above 2 coats of cement plaster, 1 part of cement to 1 part of sand, prepared in a very liquid condition will be floated over it and allowed to set.

ii) Laying :

After the tiles have been soaked in water for atleast two hours and the cement foundation sprinkled with water, laying work may commence and shall start from the centre of the room or area to be tiled, work being continued in both directions so that borders are laid last. Each tile will be laid in and drawn up in neat cement, care being taken to exclude air bubbles. Threads shall be stretched cross the surface, at intervals, parallel to the short sides of the area to be tiled to serve as guide lines.

iii) Cleaning :

After a small area has been laid all superfluous cement will be wiped off the surface. Stains shall be removed by moistening with hydrochloric acid and rubbing with pumice stone and afterwards washing with warm water.

vi) Fixing to walls:

In fixing tiles to walls the walls shall be rendered with cement plaster and the plaster scored diagonally and allowed to set. When laying the tiles work shall commence from the bottom, the

back of each tile being smeared with neat cement of the consistency butter and the tile pressed into position.

6.00 DOOR SHUTTERS:

6.01 FACTORY MADE DOOR SHUTTER:

Providing Supplying & fitting 35/45mm thick compressed ready to fit wood door shutter conforming to IS : 15380 - 2003, primed, shutter comprising of High Density Fiberboard skins (HDF) of 3.5mm (hardened finely processed natural wood fiber) with panel design compressed on both faces, sandwiching termite and borer resistant chemical treated and kiln seasoned wooden stiles and rails of 50 mm - 60 mm width, lock block and high density flax board core / chemical treated and kiln seasoned timber core infill.

Shutter should be bonded with Phenol Formaldehyde or adhesive/s conforming to BWP grade of IS 848. Shutter should have trim ability option of 12.5 mm from all sides. The Door should have flexibility for painting or polishing to match any interiors & fixed to the pressed steel door frames, bolts etc. as specified and directed at all levels. All items shall be carried out as per drawings.

(The supplier should possess TUV certification for ISO 9001:2000, ISO 14001:2004 and OHSAS 18001:1999 as confirmation of adherence to Integrated Quality Management and Environmental Management practices.)

7.0 CEMENT PLASTERING:

i) Preparation of surface:

All putlog holes in brick work and junction between concrete and brick work shall be properly filled in advance. Joints in brick work shall be raked about 10mm and concrete surface hacked to provide grip to the plaster. Projecting burrs of mortar formed due to gaps at joints in shuttering shall be removed.

The surface shall be scrubbed clean with wire brush/coil brush to remove dirt, dust etc. and the surface thoroughly washed with clean water to remove efflorescence, grease and oil etc. and shall be kept wet for a minimum of six hours before application of plaster.

ii) Proportion :

The cement plaster shall be in 1:4 prop of cement and sand.

iii) Mixing :

The cement and sand should be thoroughly mixed in dry condition. After dry mixing the materials shall be wetted with just sufficient water to bring the mortar to proper consistency of thick paste. Mortar should be used immediately after mixing and arrangements shall be made so that not more than 30 minutes elapse between the cement first coming in contact with the moisture and laying.

iv) Placing:

Plaster shall be laid over the prepared surface in one coat to the specified thickness and rubbed with 'PATAS' and trowel and shall be smooth, free from waviness and trowel marks. Curing the plaster must be kept wet throughout the entire process and for ten days after four hours of completion of plastering.

8.00 PAINTING:

8.01 Acrylic Emulsion Paint:

The surface shall be prepared by cleaning the surfaces of the structure and making free from all dust and dirt. Interior surfaces are to be provided with 1.5mm thick wall putty punning. A primer coat either of cement primer or of an approved distemper shall be applied. After the priming coat has dried the surface shall be lightly sand papered and dusted to make it smooth to receive distemper.

Distemper shall be prepared as per the directions of the manufacturers and conforming to the shade approved. It shall be applied in specified coats taking care to allow for drying of each coat before subsequent coats are applied.

8.02 Wall texture paint:

The surface shall be prepared as specified above and thoroughly wetted with clean water before waterproof cement paint is applied.

The paint shall be prepared strictly as per manufacturer's specifications and in such quantities as can be used up in an hour of its mixing as otherwise the mixture will wet and thicken, affecting flow and finish.

The paint thus prepared shall be applied on clean and wetted surface with brush or spraying machine. The solution shall be kept stirred during the period of application. It shall be applied on the surface, which is on the shady side of the building so that the direct heat of the sun on the surface is avoided. The completed surface shall be watered after the day's work. Number of coats shall be as specified in the item.

8.03 Painting over wood work:

- a) The surface to be painted shall be thoroughly dry. All projections such as glue, all tool marks and other irregularities shall be carefully removed by means of a stopping knife and smoothed over and all head of nails or screws set 6mm below the surface.
- b) Knotting shall be carried out for all resinous woods such as pitch or red pine, an application of hot lime shall be applied to the portion to be stopped and allowed to remain for 24 hours after which it will be scraped off and the stopping completed.
- c) After the surface has been prepared as described above the primary coat shall be applied. When the primary coat has dried all nails and screw holes and all cracks shall be stopped and all irregularities shall be smoothed out with sand paper or pumice stone. Water proof sand paper is to be used.
- d) After the primary coat has dried out the subsequent coats shall be applied to the number specified. Each coat being allowed to dry thoroughly before the next coat is applied. Each coat when dry except the finishing coat should lightly rubbed down with sand paper and washed before the next coat is applied. The paint shall be applied evenly and properly by means of crossing and lying off the latter in the direction of the grain of the wood work.

8.04 Purchase of paint, varnish or oil:

Only the best brands obtainable will be used and should the contract permit the contractor to supply any paint, oil or varnish he shall purchase only such brands as the EIC shall approve of in writing. All purchases must be made direct from the manufacturers or through an agent approved of in writing by the EIC. Should the EIC so direct copies of all indents and receipts for purchase must be submitted for inspection.

8.05 Paint etc. to be purchased in sealed containers:

All paints, oil or varnishes supplied by the contractor must be produced for the inspection of the Engineer in charge of the work in the manufacturers sealed and unopened containers. All containers from which the contents have been removed and are not required on the work must be destroyed and no extra payment will be granted for such destruction.

8.06 Only ready mixed paint to be used:

Only ready mixed or varnished of the make or brand specified will be permitted to be used exactly as received from the manufacturer without any admixture what so ever unless previously authorised, in writing , by the EIC.

9.00 DAMP PROOFING COURSE:

It shall consist of 1:1.5:3 plain cement concrete with approved water proofing materials of specified thickness. Edges of DPC shall be straight, even and vertical side shuttering shall consist of wooden or steel forms and shall be strong and properly fixed so that it is not disturbed during compaction and mortar or cement slurry does not leak through. When forms are struck the surface should be smooth without any honey combing. The surface shall be kept wet for seven days.

Before commencing the superstructure work, the top of concrete course shall be dried and cleaned of all materials. Blown type bitumen shall then be applied uniformly on the surface and the side of the concrete coming in contact with flooring on the inside shall also be painted with bitumen.

10.00 WALL PUTTY:

Surface preparation for plastered wall, ceiling etc. to be done by providing average 1.50mm thick polymer based wall putty punning including clearing, rubbing with sand paper, filling gaps/depression etc. to make the surface even and smooth.

11.00 ALUMINIUM WINDOWS & VENTILATORS:

Only un plasticized Polyvinyl Chloride profiles conforming to BS EN 12608:2003 shall be used for the fabrication of windows. The profile depth must be minimum 60mm. The minimum wall thickness for the external surfaces shall not be less than 2.3mm for sliding system and 2.5mm for a casement system. The sliding system must have minimum 2 sealed chambers and the casement system must have minimum 3 chambers

12.00 WATER PROOFING:

Providing and applying over roof / raft slab, two coats of waterproofing slurry prepared with cement, fine sand in prop 1:1 admixed with modified acrylic polymer as stated below:

TECHCOAT is a two component, polyurethane polymer based waterproof coating. It cures to form impervious, tough and abrasion resistant, waterproof and weather durable coating. It remains unaffected by salt water, soap water, dilute acids, alkalis and various other chemical solutions. It reflects light and heat.

Mixing

Pour the entire quantity of Part II into Part I. Mix both the parts thoroughly by spatula to a homogenous mixture in the ratio Part I : Part II i.e., 90 : 10, parts by volume.

Thinner

Techcoat is normally supplied at application viscosity. However, 5% of solvent (Xylene / Toulene) can be used to overcome the problem of fast drying due to hot substrate & sun heat.

Direction for use

Surface preparation

Surface preparation is of great importance & will affect adhesion & life of the coating. Surface should be dry, free from dust, loose particles, damaged plaster, grease, etc. Thorough wire brushing of the surface is a must. Previously applied bituminous coating should be removed. New concrete plastered surface should be cured with water for minimum 28 days.

Waterproofing of Roof Terrace & parapet walls.

- Repair damaged cement plaster or concrete mortar with Mastercrete M-81, acrylic modifier.
- Use 5-10% by weight of M-81 on cement weight for the preparation of mortar.
- Before placing mortar, apply bond coat of O.P. cement & M-81 (2:1 parts by wt). M-81 improves the compression, flexural strength & bonding of new mortar with old concrete surfaces.
- Cure the repaired mortar for 7 days to 28 days with water before application of Techcoat.
- Fill the cracks up to 2mm width with Techoxy or Techmast with O.P. cement white / grey (1:2 parts by wt.) putty. Allow to dry for overnight 24 hours.
- Seal the cracks wider than 2mm with polysulphide sealant Techseal RDL-940 & Primer RDL-942 after making the joint / groove of 5x5 mm or 10x10mm into the crack
- For large terrace (>3000sq.ft) provide dummy joints at span of 5 meter length. Seal the joints with polysulphide sealant, Techseal RDL-940 & Primer RDL-942. Allow it to cure for minimum 24 hours.
- Seal the joint of parapet wall & roof slab as fillet seal with polysulphide sealant Techseal RDL-940 & Primer RDL-942. Allow the sealant to cure form minimum 24 hours.
- Apply 1 coat of Techoxy coating as a primer. Being water based it penetrates into the concrete, seals porosity, micro devices, hardens & waterproofs the surface. Allow it dry for minimum 10-12 hours.
- Apply 2 coats of Techcoat at an interval of 6 hours. Allow the entire waterproofing system to cure for minimum 72 hours before checking leakage test.

Vertical walls & chajjas (externally)

Normally the system used for roof terraces may be applied. For less problematic surfaces, seal the cracks with 1 coat of Techoxy followed by 1 coat of Techcoat.

Mild steel, Galvanised & aluminium water tanks (externally)

Remove rusty scales by high sandblasting / sanding with emery paper / wire brushing. Wipe the surface with solvent (Xylene / Toulene / Acetone etc) soaked cloth.

- On mild steel surface, apply 1-2 coats of epoxy primer. Apply 2 coats of Techcoat.
- On Aluminium / galvanised surface, apply 1-2 coats of polyvinyl butyl based wash primer & then apply 1-2 coats of Techcoat

Precautions:

While application proper ventilation should be provided. Avoid application in damp conditions. It will create blister.

STANDARD/TECHNICAL SPECIFICATION
(ELECTRICAL WORK):

CONDUITING:

All PVC conduits shall be of manufactured 2mm thick up to 32mm dia and of 3mm for sizes higher than this. Both inner and outer surfaces shall be smooth without burrs, dents and kinks. Conduits shall be black stove enameled inside and outside. The cross section of conduit shall be uniform throughout. Conduit shall conform to specifications of IS-1653-1972 and the capacity conduits shall be in accordance with the standards and shall never be exceeded. The minimum size of the conduit shall be 20mm dia.

Conduit accessories such as normal bands, unions, circular junction boxes and pull boxes, lock nuts etc. shall be heavy gauge type and approved make. Conduit accessories shall conform in all respects to IS-3837-1966.

Conduits shall be laid before casting in the upper portion of a slab or otherwise, as may be instructed or in accordance with approved drawings, so as to conceal the entire run of conduits and ceiling outlet boxes. Vertical drops shall be buried in columns or walls. Wherever necessary, chases will be put by the contractor with the prior orders of the Consultant. In case of exposed brick/rubble masonry work special care shall be taken to fix the conduit and accessories in position along with the building work.

Sufficient depth of the chases will be made to accommodate the required number of conduit. The chase will be filled with cement, coarse sand mortar (1:3) and properly cured by watering for one week. If a chase is cut in an already finished surface the contractor shall fill the chase and finish it to match the existing finish. Contractor must not cut any iron bars to fix conduits. Conduits shall be kept at a minimum distance of 100mm from the pipes of other non-electrical services. Where the conduits is to be embedded in a concrete member it shall be adequately tied to the reinforcement to prevent displacement during casting, conduits in chases shall be held by steel hooks of approved design at maximum of 60cm centres. The embedding of conduits in walls shall be so arranged as to allow at least 12mm plaster cover the same. All threaded joints of conduit pipes shall be treated with some approved 'preservative compound' to secure protection against rust.

Suitable expansion joints fittings of approved make and design shall be provided at all the points where the conduit crosses any expansion joints in the building.

Separate conduit shall be used for:

- a) Normal light, fan and 5A 3 pin/2 pin sockets.
- b) Power outlets
- c) Telephones
- d) TV/Antenna

Wiring for short extensions to outlet in hung ceiling or to vibrating equipment, motors etc. shall be installed in flexible conduits. Flexible conduits shall be formed from a continuous length of spirally wound interlocked wire steel with a fused zinc coating on both sides. The conduit shall be watertight type with approved type adopted. A separate and accessible earth connection shall bond across the flexible conduit.

Conduit runs on surfaces shall be supported with metal 12 gauge thick saddles, which in turn are properly approved on to G.I./ M.S. spacer to the wall or ceiling. Saddles shall be at intervals of not

more than 50 cm. Fixing screws shall be with round or cheese head and of rust proof materials. Exposed conduits shall be nearly run parallel or at right angles to the walls of the building and shall be painted in colour matching the adjoining area. Unseemly conduit bends and offsets shall be avoided by using better appearance. Cross cover of conduits shall be minimum and entire conduit installation shall be clean and with good appearance.

No conduits are allowed to be run in the floor except by special permission of consultant and this only in extra ordinary circumstances by coating of bitumen over conduit.

PVC bushes of approved quality shall be used in each conduit termination in a switch box, draw box, lighting fixtures and circular junction boxes as required.

Exposed conduits running above false ceilings shall be suitably clamped with the dropped ceiling. Perforated straphangers or twisted attachment shall not be acceptable. In no case shall raceways be supported or fastened to other pipe for repair and maintenance.

They shall be arranged symmetrically and in the most compact design in no way unduly criss-crossing each other. Proper spacing shall be maintained when two or more conduits run side by side. The layout of the pipes shall be co-ordinated with the shop drawing for dropped ceiling.

The conduit of each circuit or section shall be completed before conductors are drawn in. The entire system of conduit after erection shall be tested for mechanical and electrical continuity throughout and permanently connected to berth conforming to the requirements by means of special approved type of earthing clamp efficiently fastened to conduit pipe in a workman like manner for a perfect continuity between the earth and conduit.

The conduit system shall be so laid out that it will obviate the use of teas, elbows and sharp bends. No length of conduit shall have more than the equivalent of two quarter bends from inlet to outlet. The conduit itself being given required smooth bend with radius of bends suiting to the site conditions but not less than 6 times overall diameter.

The conduits shall be of ample sectional area to facilitate the drawings of wires/cables. In no case shall the total cross section of wires/cables measured overall, be more than half the area of the conduit.

Outlet boxes shall be of 18 SWG sheet steel and so installed as to maintain continuity throughout. These shall be so protected at the time of laying that no mortar finds it was during concept concrete filling on plastering. For fluorescent fitting, 2 Nos. outlet boxes shall be provided 300mm off centre for a 1200mm fitting and 150mm off centre for a 600mm fitting.

Draw boxes of ample dimensions shall be provided at convenient points to facilitate pulling of long runs of cables. They shall be completely concealed with M.S. covers flush with plaster work painted to match the wall. These boxes will be as few as possible and located where found suitable by the consultant. All the G.I. sheet/zinc passivated boxes used for housing switches, plugs, fan regulator etc. shall be five sided conforming to IS-5133 Part I-1969 with latest amendment. The boxes shall be provided with four to six fixing lugs located at the corners and vertical sides. All fixing lugs shall be threaded to receive standard machined chromium plated brass screws. Sufficient number of knockouts shall be provided for conduit entry. Conduits carry wires of different circuit can terminate in common J.B. having metal compartments. Necessary G.I. pull wires shall be inserted into the conduit for drawing wires.

The switch boxes used for housing switches, plug/ fan regulator etc. shall be in passivated /GI five sided. Provision of bridge for mounting fan regulator and necessary brass earth point shall be provided on the box, as required. These shall be attached to conduits by means of check nuts on either side of their walls. These shall be completely concealed leaving edges flush with all surfaces. Moulded switch plates shall be fixed to these by means of chromium plated brass machine screws as required. The switch box shall be provided with earth terminal. No. timber shall be used for any supports. Boxes, which come within concrete, shall be installed at the time of casting. Care shall be taken to fix the box rigidly so that its position is not shifted while concreting

The entire conduit system including outlet and boxes shall be thoroughly cleaned after completion of erection and before drawing in cables.

To safeguard against filling up with the plaster etc. all the outlet boxes and switch boxes will have to be provided with temporary covers or PVC stoppers within the tendered cost which shall be replaced by 3mm thick Bakelite covers/moulded type switch plates as required.

WIRING:

P.V.C. insulated copper conductor cable shall be used for sub-circuit runs from the distribution boards to the points and shall be pulled into conduits. They shall be stranded copper conductors with thermoplastic insulation of 660/1100 volts grade. Colour Code for wiring shall be followed.

Looping system of wiring shall be used, wires shall not be jointed. Where joints are unavoidable, they shall be made through approved mechanical connectors with prior permission of the consultant. No. reductions of strands are permitted at terminations. No wire smaller than 1.5 sqmm shall be used. Wherever wiring is run through trunkings or raceways, the wires emerging from individual distributions shall be bunched together with cable straps at required regular intervals. Identification ferrules indicating the circuit and D.B. number shall be used for sub mains sub-circuit wiring. The ferrules shall be provided at both end of each submain and sub-circuit.

Where single phase circuits are supplied from a three phase and a neutral distribution board, no conduit shall contain the wiring fed from more than one phase. In any one room in the premises where all or part of the electrical load consists of lights, fans and/or other single phase current consuming devices, all shall be connected to the same phase of the supply. Circuits fed from distinct sources of supply or from different distribution boards or through switches or M.C.Bs shall not be bunched in one conduit. In large areas and other situations where the load is divided between two or three phases no two single phase switches connected to different phases.

All splicing shall be done by means of terminal blocks or connectors and no twisting connection between conductors shall be allowed.

Metal clad sockets shall be of dia cast non-corroding zinc alloy and deeply recessed contact tubes. Visible scraping type earth terminal shall be provided. Socket shall have push on protective cap. Socket shall have MCB as specified in the schedule of work.

All power sockets shall be piano type/moulded plate switches with associated switch of same capacity. Switch and socket shall be enclosed in a G.I. sheet steel/zinc passivated boxes enclosure with the operating knob projecting. Entire assembly shall be suitable for wall mounting with a Moulded plate switch cover.

Switches shall be connected on the live wire and neutral of each circuit shall be continuous everywhere having no fuse or switch installed in the line excepting at the main panels and boards.

Each power plug shall be connected to each separate and individual circuit unless specified otherwise. The power wiring shall be kept separate and distinct from lighting and fan wiring.

Balancing of circuits in three phases installation shall be arranged before installation is taken up. Unless otherwise specified no more than ten light points shall be ground on one circuit and the load per circuit shall not exceed 1000 watts. The earth continuity PVC insulated copper wire in Green colour shall be run inside the conduit to earth the third pin or socket outlets earth terminal of light fixtures, fans etc. as required. Light points shall be either of single control, twin control or multiple points controlled by a single switch/MCB as per schedule of work. Bare copper wire shall be provided with each circuit from DB as specified in the item of work and terminated in earth bar of DBs and switch boxes with proper lugs as required.

LUMINARIES:

The lighting installation has been designed in accordance with modern practice and generally in accordance with modern practice and generally in accordance with ISI code for Interior Lighting. The scope of the work shall be supply, installation, connection and commissioning of all lighting fixtures as specified herein and shown in the drawings.

Light fixtures shall be fixed in a workman like manner as per best trade practices and according to the instructions of the manufacturers, Lighting fixtures which are recessed in the dropped ceiling shall be thoroughly matched and co-ordinated with the pattern and design of the dropped ceiling as shown in architectural drawings. Care shall also be taken to co-ordinate the lighting fixtures details with all other services such as air-conditioning, plumbing, fire alarm detectors etc. It has to be ensured that all light fixtures in a row are in the same line and level and at exactly equal distances unless otherwise required.

All the materials used in the construction of luminaries shall be of such quality, design and construction that will provide adequate protection in normal use, against mechanical, electrical failures/faults and exposure to the risk of injury or electric shock and shall withstanding the effects of exposure to atmosphere.

EARTHING:

All non current carrying metal parts of electrical installation shall be earthed as per IS 3043-1966. All metal conduits, cable sheathes, switchgear, DBs, light fixture, equipment and all other parts made of metal shall be bonded together and connected to earth electrodes. Earthing shall be in conformity with provision of Rules 32,61,62,67, and 63 of Indian Electricity Rules 1956.

All earthing shall be of high conductivity copper,. G.I. and shall be protected against mechanical damage. The cross-sectional area of earth conductors shall not be smaller than half that of the largest current carrying conductor. However the contractor shall use the sizes specified in the bill of quantities.

- a) All fixtures, socket outlets, fans switch boxes and junction boxes etc. shall be earthed PVC insulated copper wire as specified in item of work. The earth wires ends shall be connected with solder less bottle type copper lugs.
- b) All single phase DBs up to 60Amps shall be earthed with 8 SWG GI wire as per Item of work.
- c) All three phases switch board up to 100 Amps rating shall be earthen with 2 Nos. distinct and separate 4 SWG GI wire as per item of work.
- d) All switch board of rating more than 100 A and above shall be earthen with 2 Nos. separate and 25x6mm G.I. tape or as per item of work/drawing.
- e) All the earthen wires in switch boxes, DBs and light fixture shall be provided with green colour PVC sleeving.

Main earth bus shall be taken from the L.T. switch board to earth electrodes. The electrical resistance of earthing conductors shall be low enough to permit passage of fault current necessary to operate fuse or circuit breaker and shall not exceed 1 ohm.

The earthing electrodes shall consist of plate (60cm x 60cm x3mm) thick tinned copper plate or GI MS plate electrode (60cm x 60cm x 6mm) or GI pipe 40mm dia and 4.5 meter length 'B' class as described under schedule of quantities, Galvanizing of the pipe/plate shall conform to relevant Indian Standards. The plate electrode shall be buried in ground with its face vertical

and top not less than 3mm below G.L. The earth plate pipe shall be buried in the ground below the permanent moisture level but not less than 3.7 metre below ground level. The plate shall be filled with charcoal dust and common salt filling extending 15 cm around it on all sides. There shall be “a” 20mm dia ‘B’ class GI pipe running from top of plate up to the ground level for watering pipe. The top of the pipe shall be provided with a funnel and a GI mesh screen for watering the earth. This will be housed in a masonry sump with cement plastering or a cement concrete sump not less than 30cm square and 30cm dep. A.M.S. frame with hinged cover and locking arrangement shall be suitably provided over the G.I. pipe electrode shall be cut tapered at the bottom and provided with holes of 12mm dia, drilled not less than 7.5cm from each other up to 2.0 metre of length from bottom. The pipe shall be buried in the ground vertically with its top not less than 20cm below ground level. The earthing lead from electrode onwards shall be suitably protected from mechanical injury by a 15mm dia, GI pipe in case of wire and by 40mm dia ‘B’ class GI pipe in case of strip portion of this protection pipe within ground shall be buried at least 30cm deep (to be increased to 60cm in case of road crossing and pavements). The portion within the building shall be recessed in walls and floors to adequate depth. In the case of plate earth electrode the earthing lead shall be securely bolted to the plate with two bolts, nuts check nuts and washers. In case of pipe earth electrode, it shall be connected by means of through bolt, nuts and washers and cable socket. All materials used for connecting the earth lead with electrode shall be GI in case of GI pipe and GI plate earth electrodes and of tinned brass in case of copper plate electrode.

No earth pit shall be fixed within 2.5 metre of a wall or foundation. Efforts shall be made to locate them in grass lawns or near flower beds or water taps. The distance between two earthing stations shall be at least 2.5 metres.

CABLE TERMINATIONS:

All the cable termination shall be executed with crimping tool using DOWEL make cable socket. Compression brass cable glands wherever used shall be of correct size for cable and terminations. No. oversize cable glands shall be used. The gland must grip the armour of the cable firmly, so that in the event of ground movement no undue stress is transferred to the cable conductors. Corrosion inhibiting compound shall be applied on the conductor before crimping the lugs. The gland must establish good electrical contact between cable armour, load sheath and body of switch gear. Identification ferrules indicating the circuit shall be used for incoming and outgoing cables. The ferrules shall be provided at both ends of each cable.

CABLE WORK:

While laying underground cables, care should be taken so that any underground structure such as water pipes, sewage lines etc. are not damaged. Any telephone or other cable coming in the way shall be properly protected as per instructions of the Architect.

The LT cables shall be laid not less than 90cm below ground level in a trench 45cm wide minimum. The depth of the trenches shall be uniform throughout as far as possible.

When the cables is properly strengthened and laid in the trench, it should be covered all around 80mm thick layer of sand. Approved cable indicators shall be fixed at suitable distance along the route of the cable.

Unless otherwise specified the cables shall be protected by second class bricks of not less than 22.5 x 10 x 7cm or stone tiles or any other approved material placed on sides and top of the cable to form a channel throughout the length.

Stoneware pipes or spun reinforced concrete pipes shall be provided for all road crossings. The size and nature of the shall be decided by the Engineer-in-charge and shall not be less than 10cm in dia meter for a single cable and not less than 20cm for more than one cable. These pipes shall be laid in the ground with 10cm in diameter for a single cable and not less than

20cm for more than one cable. These pipes shall be laid in the ground with 10cm thick bed of cement concrete 1:5:10 and may be loose jointed. The top surface of pipe shall be at a minimum depth of 90cm from the ground level when laid under the roads/pavements.

DISTRIBUTION BOARDS:

Distribution boards shall be of standard make with MCBs as per approved make given Appendix 'A' Distribution boards shall be constructed out of 16 SWG sheet shall be painted with enamel paint. Ample clearance between the conductors of opposite pole, between conductors and sheet steel body shall be maintained in order to obviate any chance of short circuit. Removal conduits entry plates shall be provided at top and bottom to facilitate drilling holes at site to suit individual requirements. The MCBs shall be mounted on a high grade rigid insulating support and connected by electrolytic copper bus bars. Each incoming MCB isolator shall be provided with solder less cable sockets for crimping Phase separation barriers made out of arc resistant materials shall be provided between the phases. Bus bars shall be colour coded for phase identification.

Distribution board shall be recessed in wall niche or if required mounted on the surface of the wall with necessary clamp bolts etc. as required at a height not exceeding 1600mm from finished floor level. Distribution board shall be provided with proper identification name plate danger mark etc.

All the distribution board shall be marked 'lighting' 'power' or 'Emergency' as the case may be. Each DB shall be provided with a circuit list giving details of each circuit. All the outgoing circuit wiring shall be provided with identification ferrules giving the circuit number and phase.

Each distribution board shall have a separate neutral connection bar and a separate earth connection bar mounted within the board each having the same number of terminals as the total number of outgoing individual circuits from the distribution board. Suitable earth terminal shall be provided on the distribution board for bonding to earth.

Distribution boards shall be duly rust inhibited through a process of degreasing, acid picking phosphating and spray primer. The entire board shall be rendered dust and vermin proof with necessary sealing gaskets.

MCBs shall have quick make and break non-welding silver alloy contacts, both on the manual and automatic operation. MCBs shall be of thermal magnetic type with reverse time-delay over-current tripping having a short circuit rupturing capacity of 9 KA. In case of multiple brackets, the tripping must be on all the poles and shrouded, wherever MCB isolators are specified they are without the tripping elements. Necessary adopter box of suitable size shall be provided to facilitate the wiring and nothing shall be payable on this account.

SWITCH BOARDS (CUBICAL TYPE) WITH MCCB:

The switch board shall be metal clad, totally enclosed, single front, floor mounted, cubical type for use on 415 volts 3 phase, 50 cycles systems with a fault level withstand of 35 KA RMS symmetrical. The switchboard shall be made up of the requisite vertical sections, which when coupled together shall form continuous dead front switchboards of dust and vermin proof construction. The panels shall be fully compartmentalized and shall be arranged in multi-tier-formation. The top and bottom of each compartment shall have barrier of minimum 14 SWG M.S sheets. The structure shall be of rigid welded/bolted construction with C.R.C. sheet steel of not less than 14 SWG thicknesses. The doors, covers, barriers etc. shall be made of 14 SWG thick steel sheets. A base channel of minimum 75mmx75mmx5mm thickness shall be provided at the bottom. At least 250mm space shall be provided above channel (i.e. 325mm from floor)

in which no switch gear shall be fixed. Joints of any kind in sheet metal shall be seam welded, all welding slog grounded off and welding pits wired smooth with plumber metal.

All panels and covers shall be properly fitted and square with the frame. Holes in the panels shall be correctly provided and tapped into an adequate thickness of metal or provided with nuts, for convenient fixing of screws; self threading of screws shall not be used in the fabrication of the panels. All doors shall be provided with neoprene gaskets. Each vertical panel structure shall contain a cable way alloy of adequate width with provision for suitable cable supports. The cable compartment shall have hinged door. There shall be a separate gland plate for each cable entry so that there will not be dislocation for already wired circuits when new feeders are added. The entire switch board shall be factory assembled conforming to IS: 8623 and shall be made in the works of the switchgear manufacturer of approved make. The contractor shall get shop drawings approved by the consultant before undertaking manufacture of switchboards.

The panel shall include the required number of MCCB aluminium bus bars, as per requirement and item of work.

The units should be arranged in their formation to provide a compact switchboard having a pleasing appearance. The minimum depth of switch board shall be 300mm and the height be restricted to 2000mm. Steel sheet hinged lockable doors shall be duly interlocked with fuse switch unit to prevent opening of the panel when the switches is in 'ON' position. Safety interlocks shall be provided also. All the M.C.C.B's shall be provided with vertical operation.

The bus bars shall be positioned at top or side position. The bus bars shall be air insulated and made of high conductivity. High strength aluminium alloys of current density not less than 1 Amps/sq.mm complying with the requirements of glass E91E of IS: 5082 designed and shall uniform cross section throughout the length. The bus bars shall be held by especially polyester glass moulded (SMC) at sufficiently close intervals to prevent bus bar sag and to effectively withstand electro magnetic stresses in the event of a short circuit. All the bus bars and risers shall be fully insulated with PVC sleeving with necessary colour coding. High tensile bolts and spring washers shall be provided at all bus bars joints. Vertical bus bars for outgoing compartments shall run the full height of the panel to cater to all combinations of modules in a section.

All indicating instruments shall be of the flush mounting industrial pattern, conforming to the requirement of IS: 1248, indicating lamps shall be of the neon type. Separate compartment shall be provided for accommodating instruments, indicating lamps control contractor and fuses etc. There shall be accessible for testing and maintenance without any danger of accidental contact with live parts of the circuit breaker, fuse switch units, but bars and connections.

Horizontal wire way with screwed cover shall be provided at the top to take interconnecting control wiring between different vertical sections. Control wiring shall be of copper conductor and shall be colour coded for easy identification of circuits. This should be of not less section than 2.5 sq.mm not more than two connections shall be made off one terminal.

All cables shall neatly bunch and shall be secured to wiring cradles. All outgoing cabled shall be fitted with identification ferrules at each end. Circuit diagram showing the arrangement of circuits shall be pasted on the inside of panel door and covered with transparent plastic sheet. Knockout holes of appropriate size and numbers shall be provided with panel in conformity with the location of incoming and outgoing cables/conduits. Facility shall be provided for termination of cables from both above and below the panel. Where cables enter from below, cable glands shall be fitted at the bottom and arranged in tiers to facilitate making connections to the upper and lower unit. Clamps shall be provided to support the weight of the cables.

Aluminum flat of suitable size with two earthing cables eyes shall be provided for connections to main earth. The earth bar scale run within the base frame.

TECHNICAL REQUIREMENTS

ELECTRICAL

SCOPE OF WORK:

- All conduits shall be of 2mm thick PVC and all accessories such as normal bends, unions circular junction boxes and pull boxes, lock, nuts etc. shall be heavy gauge type of approved make and in all respects shall conform to IS-3738-1966.
- Lighting installations to be designed in accordance with modern practice and in accordance with IS code for interior lighting.
- All non -current carrying metal parts of electrical installations shall be earthed as per IS 3034-1966. Earthing shall be in conformity with provision of rules 32, 61, 62, 67 & 63 of Indian electricity rules 1956.
- Lying of cables shall be as in detailed specification for electrical works.
- Ceiling Fan shall be provided with electronic regulator.
- Exhaust fans in hall & toilets.
- Metal clad socket cover point shall match the wall surface.
- Telephone wire conduit shall be provided up to JB with double pair 0.6mm dia ATC telephone cable from each point to Telephone JB tag Block. Telephone connections shall be provided in drawing rooms and bedrooms.
- PVC pipe under floor for crossing telephone cables etc.
- Lighting protection shall be provided at top of building with minimum 2 nos. 25mm dia 300mm long spike having single 25 x 3mm G.I. tape over horizontal and vertical down conductor up to testing joints to earth station should be 32x6mm and 4 nos. plate earthing as approved by Architect Point earthing shall be provided.
- For anything not mentioned here, please refer to drawings for details.

GENERAL:

- 1.1** All electrical work shall be carried out in compliance with specifications given hereunder in this section and in compliance with Indian Standard specifications and Indian Electricity Act and Rules in force. The works shall also conform to any special requirement of local State Electricity Board. In case, the above mentioned, regulations etc. are not in accord, the decision of the Engineer-in-charge/Consultant regarding rules to be followed or manner of execution of work shall be final and binding. The work shall be executed under the direct supervision of person holding a certificate of competency issued by the State Government (Chief Electrical Inspector)

- 1.2 For the type of works involved in conformity with the best methods of modern engineering practice and to the entire satisfaction of the Architect/Engineer-in-charge. The contractor has to submit the test report at various stages of completion as per requirement of the Client.
- 1.3 These special conditions of contract shall be read in conjunction with the General Conditions of contract, Schedule of Quantities, Technical Specifications, Drawings and other documents relating to the work and shall have preference over laid down general conditions and specifications.
- 1.4 Notwithstanding the sub-division of the documents into these separate sections and volumes, every part of each shall be deemed to be supplementary and complementary to every other part and shall be read with and into the contract, so far as it may be practicable to do so.
- 1.5 The contractor shall mobilize and employ sufficient resources to achieve the detailed schedule within the board framework of the accepted methods of working and safety. The contractor shall provide everything necessary for the proper carrying out of the work, including tool plant and other materials.
- 1.6 No additional payment will be made to the contractor for any multiple shift work of other incentive methods contemplated by him in his work schedule even though the time schedule is approved by the Architect/Engineer-in-charge.
- 1.7 The work shall be executed as per the programme drawn on approved by the Architect and it shall be so arranged as to have to full co-ordination with any other agency employed at site. No claim on account of the delay in the completion of the building work be tenable except extension of time secured by the contractor as stated elsewhere.
- 1.8 The contractor shall permit free access and afford normal facilities and usual conveniences to other agencies or departmental workmen to carry out connected work or other work services under separate arrangements. The Contractor will not be allowed any extra payment on this account.
- 1.9 All soil, filth or other matter of any offensive nature taken out of any trench, sewer drain, cesspool or other place shall not be deposited on the surface but shall at once be carted away by the contractor from of charge to a suitable pit or place to be provided to him.
- 1.10 The contractor shall provide all equipment, instruments, labour and such other assistance required by the Engineer-in-charge for measurements of the work, materials etc.

MATERIALS:

- 2.1 All materials, equipment, fittings and fixtures used in electrical works shall conform to I.S.I. All material shall be new, soundly and robust in construction and well finished. Surplus materials after completion of work shall be taken back by the contractor and the cost shall be recovered if the advance payment has been made earlier by the Client.
- 2.2 Unless otherwise stated in the conditions of contract samples of all materials, fittings and fixtures to be supplied by the contractor shall be submitted to the EIC/Consultant for his approval. The contractor shall not commence the work until the samples are approved, in writing from the EIC/Consultant. The contractor shall ensure that all the

material incorporated in the work is identical in all respects with the approved sample. All samples not destroyed in testing shall be returned to the contractor after completion of contract. No payment shall be made for samples destroyed in testing.

DRAWINGS:

- 3.1** The drawings and specifications shall be considered as a part of this contract. Any work or materials shown on the drawings but not included in the schedule of quantities or vice-versa shall be executed as if specifically called for in both without any additional cost. The contract drawings indicate the extent and general arrangement of various equipments and their wiring etc. and are essentially diagrammatic. The work shall be installed as indicated on the drawings, however, any minor change if found essential to co-ordinate the installation of this work with other trade shall be made without any additional cost to the Owner. The data given herein and on the drawings is as could be secured, but its complete accuracy is not guaranteed. The drawings and specifications are for the assistance and guidance of the contractor, the exact locations, distances and levels will be governed by the space conditions. The contractor shall be responsible to check exact location of all electrical outlets, the routes and lengths of cables etc.

CLARIFICATIONS OF DISCREPANCIES:

- 4.2** In case of any discrepancy between specifications and drawings etc. furnished by the Architect or disputes in respect thereof, the interpretation of the Engineer-in-Charge shall be final and binding.

MISCELLANEOUS:

- 5.1** A site order book will be maintained at site which will be in the custody of the Architect or his representative and all instructions given to the contractor will be recorded in the site order book and the same has to be signed by the contractor to comply with the instruction given therein.
- 5.2** After completion of the whole installation shall be tested by the contractor in the presence of the Architect. The tests shall comply the following I.E.E. Regulations and shall be submitted along with the final bill.
- a)** The result of the insulation test shall comply with the I.E.E. Regulations 1101 to 1108A and 1108B with latest amendment as may be applicable.
 - b)** Test shall be carried out to ascertain that all the non-linked SP switches have been connected to the phase conductor.
 - c)** The continuity test of the earthing system shall comply with I.E.E. Regulations 1108 to 1109 to the latest addition.

If the results of the above tests does not comply with the I.E.E. Regulations, the contractor shall be bound to rectify the faults so that the required results are obtained at no extra cost.

The contractor shall be responsible to provide all the necessary testing instruments, such as mage up to 2.5 kV range insulation tester, earth tester multimeter, AVO meter etc. for carrying out the above tests.

- 5.3** The work will not be considered as complete and taken over by the Employer till all the components of the work after being completed at site in all respects have been

inspected/tested by the Engineer-in- charge/Consultant to his entire satisfaction and a completion certificate issued by the EIC/Consultant to this effect.

5.4 At the completion of the work and before issuance of certificate of virtual completion, the contractor shall submit to Architect layout drawings one reproducible and 4 set of prints drawn at approved scale indicating the complete wiring/conduiting/cabling/earthing system as installed.

5.5 The contractor will submit within 15 days of the award of work, a detailed sequence of work.

WORK AND WORKMANSHIP:

6.1 The work shall be of the highest standard,/both as regard its design and workmanship. Modern tools and first class, latest techniques shall be employed for its execution.

6.2 Any damage done to the building during the execution of work shall be responsibility of the contractor and it shall be made good by him, at his cost, to the entire satisfaction of the Consultant.

6.3 All electrical work shall be executed by skilled and duly licensed electricians under the direct supervision of whole time, fully qualified licensed electrical engineers and supervisors. The contractor shall produce requisite evidence regarding the qualification of the engineer, supervisors and other workers.

6.4 The contractor shall possess all the relevant and valid licenses as per the regulations of the Indian Electricity Rules and the Local Electrical Inspector's requirements.

6.5 The work shall have to be in co-ordination with the building work and other allied jobs/trades to the entire satisfaction of Engineer-in-charge/Consultant.

CERTIFICATE OF INSPECTION:

7.1 The contractor shall be responsible for getting the installation inspected and approved by the Electrical Inspector and other, level electrical supply company as required.

7.2 The contractor shall obtain and deliver to the Architect the certificate of final inspection and approval of the local electrical authorised concerned. The inspection fees etc. shall be borne by the contractor.

7.3 In case of any defect/s pointed out by the Electrical Inspector, the contractor shall remove these defects at his own cost and arrange for re-inspection or inspection by the electrical inspector, till such time the installation is finally approved and the required certificate is issued. The contractor shall bear all expenses and deposit the necessary fees for subsequent inspections by the Electrical Inspector.

7.4 The Consultant shall have full powers to get the material or workmanship etc. inspected and tested by an independent agency, at the contractor's expenses in order to ascertain their soundness and adequacy.

7.5 Conduit layout for Electrical works shall be prepared by the contractor and got approved before starting of the work.

7.6

In the event of any clarification necessary. The contractor should consult EIC/Consultant.

LIST OF MANDATORY TEST

S.N.	MATERIAL	TEST	FIELD/LABOTORY TEST.	MINIMUM QTY OF MATERIAL FOR CARRYING OUT THE TEST.	FREQUENCY OF TESTING IF QTY. IS BEYOND THE MINIMUM QTY.	REFERENCE FOR TESTING/ REQUIREMENTS
1.	Sand	Bulking of Sand	Field	20 cum.	Every 20 cum or part Thereof or more frequently as decided by EIC.	As per CPWD specifications.
		Silt Content	Field	20 cum.	Every 20 cum or part Thereof or more frequently as decided by EIC.	As per CPWD specifications.
		Particle size Distribution	Field or Laboratory as decided by the EIC.	40 cum.	Every 40cum. Of fine aggregate/sand required in RCC work only.	As per CPWD specifications.
					Every 40 cum. Of fine aggregate/sand required for other items.	-do-
2.	Stone Aggregate	Percentage of soft or deleterious materials;	General visual inspection, laboratory test wherever required by the EIC or as specified.	As Required by the EIC.	For alt. quantities.	IS- 2386, Pt-II, 1963
		Particle size distribution	Field or Laboratory as required by EIC.	45 cum.	For every 45 cum or part thereof as decided by EIC.	As per CPWD specification.
		Ten Percent fine value.	Laboratory	45 cum.	Initial test and subsequent test as and when required by EIC.	As per CPWD specification.
3.	Cement (OPC)	I.Consistency. II.Strength.	Laboratory. -do-	1000 bags	One from each source/manufacturer or more frequently as decided by EIC.	IS:8112, 43 Grade IS: 12269,53 Grade.
4.	Steel for Reinforcement.	I.Tensile Strength. II.Bend Test. III.Weight.	Laboratory Laboratory Field/Lab	20M.T.	-do-	IS: 1608-1972 IS: 1599-1985
5.	(a) Water for Construction purposes	I.Chemical & II.Physical Properties	Laboratory -do-	From each source	Before commencement of work and thereafter every three months till completion of work.	IS: 3025-1986
	(b) Water for potability	-do-	Laboratory	From each source	As decided by EIC.	IS: 10500-1991
6.	Cement concrete or reinforced cement	I.Slump Test.	Field	15 cum.	15 cum or part thereof or more frequently as required by EIC.	As per CPWD specification.

	concrete					
7.	Reinforced Cement Concrete. (a) Nominal Mix	I.Cube Test.	Laboratory	(a) 20 cum. in slab, beams & connected columns.	(a) Every 20 cum. of a day's concreting.	IS: 516-1956 & CPWD specification.
8.	Bricks/Bricks Tiles	Testing of Bricks/ Brick Tiles for dimensions, compressive strength, water absorption and efflorescence.	Laboratory	2000 nos.	As per CPWD specifications.	IS: 3495-1976.
9.	Timber.	I.Moisture. II.Bulk Density. III.Species	Field (by moisture meter) or laboratory test as required by EIC.	1 cum.	Every one cum. or part thereof.	IS: 287-1973 & IS: 1003-1004.
10.	Flush Door	I.End Immersion Test. II.Knife Test. III.Adhesion Test Thickness of anaodic coating.	Laboratory	26 shutters	As per CPWD specifications.	IS: 2202-1991(Part I & II)
11.	Aluminium door and window fittings	Thickness of anaodic coating	Laboratory	If the cost of fittings exceed Rs. 20,000 /-	Rs. 20,000/- or part thereof as required by EIC	IS :5523-1969
12.	Mortise Lock	Testing of spring	Laboratory	50 nos.	100 or part thereof	IS:2209-1976
13	Terrazo Tiles	I.Transverse Strength II.Water absorption III.Abrasion test	Laboratory -do- -do-	5000nos.(No testing need be done if total number of tiles of all types of all sizes from all manufacturers used in a work is less than 5000 Nos)	One test for every 10,000 nos. or part thereof for each type and size from a single manufacture.	IS:1237-1980
14	White Glazed tiles/Ceramic Tiles (for floor and wall)	I.Water absorption II.Crazing test III.Impact strength IV.Chemical test	Laboratory Laboratory Laboratory	3000nos.	3000nos. or part thereof	IS:777-1988
15	Aluminium sections for doors and windows.	Thickness of powder coating or thickness of anodizing	Laboratory	250Kg	250Kg or part thereof	IS:5523-1969
16	Marble	I.Moisture absorption	Laboratory	50Sqm	50Sqm or part thereof.	IS:1124-1974

		II.Mhos scale hardness test.				
17	Commercial Board/Block board	I.Thickness test II.Dimensional test III.Resistance to water IV.Adhesion of piles	Field Laboratory Laboratory Laboratory	100Sqm	100Sqm or part thereof.	IS:1659-1590
18	Plywood	I.Thickness test II.Glue strength in dry state III.Glue sheer strength (in water resistance test) IV.Moisture content	Field Laboratory Laboratory Laboratory	100Sqm	100Sqm or part thereof	IS:303-1989
19	Particle Board	I.Thickness test II.Physical and Mechanical Properties.	Field	100Sqm	-do-	IS:3087-1985(plain) IS:3097-1980(Veneered)
20	Gypsum Board	I.Thickness test II.Transverse strength	Field Laboratory	100Sqm	100Sqm or part thereof.	IS:2095-1976
21	For Road Work Coarse aggregate	(a)Los Angeles (b)Abration value or aggregate impact value. (c)Flakiness index (d)Grading requirement	Laboratory Laboratory Laboratory Field		Per 200Cum Per 200Cum -do- Per 100Cum	IS:2386(Part-IV) IS:2386(Part -V) IS:5640 IS:2386(Part -I) IS:2386(Part -I)
22	Fine Aggregate	Deleterious	Laboratory		As required by EIC	IS:2386(Part-III)
23	Bitumen	As prescribed in IS:73	Laboratory		As required by EIC	IS:73
24	Embankment under O.M.C. condition	Moisture content Density Control test on borrow pits.	Laboratory Field Laboratory Laboratory		250Cum 250Cum One to two test per	IS:2720(Part-II) IS:2720(Part-XXVIII) IS:2720(Part-IV)

		(a) Gradation	Laboratory		8000Cum	IS:2720(Part-V)
		(b) Plasticity	Laboratory		-do-	IS:2720(Part-VIII)
		(c) Proctor test	Laboratory		As required by EIC.	
		(d) Deleterious contents	Laboratory		250Cum	IS:2720(Part-II)
		(e) Moisture contents				
25	Concrete pavement under controlled conditions Coarse Aggregate	(a) Flakiness index	Laboratory		Before approval of the quarry and every subsequent change in the source of supply and one test per 100Cum.	IS:2386(Part I)
		(b) Impact value	Laboratory		-do-	IS:2386(Part-IV)
		(c) Los Angeles	Laboratory		-do-	IS:2386(Part-IV)
		(d) Deleterious material	Laboratory		Before approval of the quarry and at every subsequent change in the source of supply.	IS:2386(Part-II)
		(e) Moisture content	Laboratory		Regularly as required subject to a minimum of one test pending.	IS:2386(Part-III)
	Fine Aggregate	(a) Silt content	Field		One test per 15Cum	As per CPWD specification
		(b) Gradation of sand	Field		One test per 15Cum	IS:2386(Part-II)
		(c) Deleterious material	Field		Before approval of the quarry and at every subsequent change in the source of supply.	IS:2386(Part-II)
		(d) Moisture content	Field		Regularly as required subject to a minimum of one test pending	IS:2386(Part-III)
		(e) Mix aggregate	Field		One test for 15 Cum of concrete.	IS:2386(Part-I)
		(f) Flexural	Laboratory		One test consisting 8	IS:526

NOTE:

- (1) FOR MATERIALS BEARING "STANDARD MARK (ISI)", MANDATORY TESTS ARE NOT REQUIRED, HOWEVER, IN CASE OF DOUBT RANDOM TESTING MAY BE CARRIED OUT AS DECIDED BY EIC.
- (2) IN CASE OF ANY AMBIGUITY, CPWD SPECIFICATIONS AND RELEVANT IS. CODES SHALL TAKE PRECEDENCE.

SCHEDULE OF APPROVED MAKES OF MATERIALS

CIVIL Items

1.	Anodized Aluminium hardware fittings	:	Everite, Hardwin, Ajit India, IPSA, Door set
2.	Water proofing compound	:	SIKA/Pidilite/Concem/Indcon/ Dr. Sealkit
3.	Bitumen	:	Indian Oil/Hindustan Petroleum
4.	PVC Piping/ fittings	:	Supreme, Prince, SFMC, Ujjwal, Sheetal bold
5.	Washable distemper	:	Asian Paint, Berger Paint, ICI, Nerolac, J&N
6.	Water proofing cement paint	:	Asian Paint, ICI, Berger, J&N
7.	Synthetic enamel paint	:	Asian Paint, Berger Paint, Dulux, Nerolac, J&N
8.	O.P. Cement	:	Top Cem/Vinay/ACC/Surya Gold/Star
9.	Reinforcement bars	:	TATA, SAIL (Fe 500 grade)
10	MS Tube, Plates	:	TATA, SAIL, Jindal, Paras
11	G. I pipes	:	TATA, JINDAL, Nezone, Hindustan
12	Factory Made Flush Doors	:	Green Ply, Century, Marino, Archid Ply
13	Glass	:	Modi, Saint Gobbin, Asahi
14	Ceramic glazed tiles	:	Somany, Nitco, Asian, Orient
15	Ceramic anti skid tiles	:	Somany, Nitco, Asian, Orient
16	Polished Vitrified tiles	:	Somany, Nitco, Asian, Orient
17	Paver Block	:	HERO tiles, Nitco, S here Janani TilesT
18	CP plumbing fixtures	:	ESSCO, SONA, Jacquar, Agmeco
19	Locks	:	Godrej, IPSA, Door set
20	Wall Putty	:	JK, Birla
21	Sanitary fitting	:	Cera, Perryware, Hindustan
22	PVC pipes	:	Supreme, Prince, SFMC, Ujjawal

23	Pump	:	Kirloskar, Crompton & Greaves
24	Water tanks	:	Sintex, Patton
25	Anti termite	:	Chloropyriphos by Tricel
26	Pre coated roofing sheet	:	Dyna, Durashine
27	PPR - Pipe		SFMC, Shivye (WET FLOW), SUPREME
28	Valve		Kirloskar, Zotoro, L & T

In addition to above, materials of ISI marked may also be used after approval of EIC / BCPL.

SCHEDULE OF APPROVED MAKES OF MATERIALS

Electrical Items

1.	Conduit pipe (ISI marked)	:	PAYAL/Polypack/Richa
2.	Copper conductor cable (1100 V grade)	:	Finolex/ Henley/Havells
3.	Moulded switch plate with switch boxes with ceiling fan electronic regulator	:	Anchor -Rider/Crabtree/Kolors
4.	Metal clad socket	:	Anchor -Rider/Havelles
5.	Distribution boards with MCBS 9KA	:	Schnider/ABB/L&T
7.	Exhaust fan, ceiling fan	:	Crompton./Usha/Havelles/Bajaj
8.	LDB	:	Larsen & Toubro / Schnider/ABB
10.	MCCB	:	Larsen & Toubro / Schnider/ABB
11.	L.T. switch board	:	Manufactures having CPRI certificate and approval of consultant/BCPL
12.	L.T. cables	:	Havelles/Polycab
14.	Luminaires	:	Philips/GE/Havels
15.	Piano type switch & socket, plugtop	:	Anchor -Rider/Crabtree/Kolors
16.	Fax Box	:	SKS/Mahajan
17.	Pump	:	Kirlosker/CG

In addition to above, materials of ISI marked may also be used after approval of EIC / BCPL.

LIST OF DRAWINGS (EXTERNAL WATER SUPPLY OF BCPL TOWNSHIP)

ARCHITECTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	LAYOUT OF EXTERNAL WATER SUPPLY NETWORK & DETAIL OF INSPECTION CHAMBER	RAA/BCPL/EXTERNAL WATER SUPPLY/T/AR-01

LIST OF DRAWINGS (EXTERNAL WATER SUPPLY OF CISF TOWNSHIP)

ARCHITECTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	LAYOUT OF EXTERNAL WATER SUPPLY NETWORK & DETAIL OF INSPECTION CHAMBER	RAA/CISF/EXTERNAL WATER SUPPLY/T/AR-01

LIST OF DRAWINGS (UNDER GROUND SUMP)

STRUCTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	UNDER GROUND WATER TANK DETAIL	RAA/BCPL/UNDERGROUND WATER TANK/T/ST-01
2.	LAYOUT & DETAIL OF TOP ROOF BEAM & SLAB FOR UNDER GROUND WATER TANK	RAA/BCPL/UNDERGROUND WATER TANK/T/ST-02

LIST OF DRAWINGS (OVER HEAD WATER TANK)

ARCHITECTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	PLAN & ELEVATION OF WATER TANK	RAA/BCPL/WATER TANK/T/AR-01

STRUCTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	WATER TANK(LAYOUT & DETAIL OF LIPE)	RAA/BCPL/WATER TANK/T/ST-01
2.	DETAIL OF WATER TANK	RAA/BCPL/WATER TANK/T/ST-01

LIST OF DRAWINGS (SUBSTATION OF BCPL TOWNSHIP)

ARCHITECTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	LAYOUT & DETAIL OF PANEL ROOM	RAA/BCPL/SUBSTATION/T/AR-01
2	DETAIL OF M.S. GRILL	RAA/BCPL/SUBSTATION/T/AR-02
3.	DETAIL OF ROLLING SHUTTER	RAA/BCPL/SUBSTATION/T/AR-03
4.	DETAIL OF DOORS	RAA/BCPL/SUBSTATION/T/AR-04
5.	DETAIL OF WINDOW	RAA/BCPL/SUBSTATION/T/AR-05
6.	TOILET DETAIL	RAA/BCPL/SUBSTATION/T/AR-06
7.	LAYOUT & DETAIL OF HOUSE DRAIN & PLINTH PROTECTION	RAA/BCPL/SUBSTATION/T/AR-07

STRUCTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	LAYOUT & DETAIL OF COLUMN & FOOTING	RAA/BCPL/SUBSTATION/T/ST-01
2.	LAYOUT OF PLINTH BEAM	RAA/BCPL/SUBSTATION/T/ST-02
3.	DETAIL OF PLINTH BEAM	RAA/BCPL/SUBSTATION/T/ST-03
4.	LAYOUT OF ROOF BEAM	RAA/BCPL/SUBSTATION/T/ST-04
5.	DETAIL OF ROOF BEAM	RAA/BCPL/SUBSTATION/T/ST-05(A)
6.	DETAIL OF ROOF BEAM	RAA/BCPL/SUBSTATION/T/ST-05(B)
7.	LAYOUT & DETAIL OF ROOF SLAB	RAA/BCPL/SUBSTATION/T/ST-06

ELECTRICAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	ELECTRICAL LAYOUT OF PANEL ROOM	RAA/BCPL/SUBSTATION/T/ELEC-01
2.	ELECTRICAL SLD OF PANEL ROOM	RAA/BCPL/SUBSTATION/T/ELEC-02

LIST OF DRAWINGS (SUBSTATION OF CISF TOWNSHIP)

ARCHITECTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	LAYOUT & DETAIL OF PANEL ROOM	RAA/CISF/SUBSTATION/T/AR-01
2	DETAIL OF M.S. GRILL	RAA/CISF/SUBSTATION/T/AR-02
3.	DETAIL OF ROLLING SHUTTER	RAA/CISF/SUBSTATION/T/AR-03
4.	DETAIL OF DOORS	RAA/CISF/SUBSTATION/T/AR-04
5.	DETAIL OF WINDOW	RAA/CISF/SUBSTATION/T/AR-05
6.	TOILET DETAIL	RAA/CISF/SUBSTATION/T/AR-06
7.	LAYOUT & DETAIL OF HOUSE DRAIN & PLINTH PROTECTION	RAA/CISF/SUBSTATION/T/AR-07

STRUCTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	LAYOUT OF COLUMN & FOOTING	RAA/CISF/SUBSTATION/T/ST-01
2.	LAYOUT & DETAIL OF PLINTH BEAM	RAA/CISF/SUBSTATION/T/ST-02
3.	LAYOUT & DETAIL OF ROOF BEAM	RAA/CISF/SUBSTATION/T/ST-03
4.	LAYOUT & DETAIL OF FIRST FLOOR SLAB	RAA/CISF/SUBSTATION/T/ST-04

ELECTRICAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	ELECTRICAL LAYOUT OF PANEL ROOM	RAA/CISF/SUBSTATION/T/ELEC-01
2.	ELECTRICAL SLD OF PANEL ROOM	RAA/CISF/SUBSTATION/T/ELEC-02

LIST OF DRAWINGS (SECURITY OFFICE FOR BCPL TOWNSHIP)

ARCHITECTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	PLAN, ELEVATION & SECTION OF SECURITY OFFICE (2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/AR-01
2	DETAIL OF DOORS (2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/AR-02
3.	DETAIL OF WINDOW (2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/AR-03
4.	LAYOUT & DETAIL OF DRAIN & PLINTH PROTECTION (2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/AR-04

STRUCTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	LAYOUT OF COLUMN & FOOTING(2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/ST-01
2.	LAYOUT & DETAIL OF PLINTH BEAM(2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/ST-02
3.	LAYOUT & DETAIL OF POST PLATE BEAM(2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/ST-03
4.	LAYOUT OF ROOF TRUSS (2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/ST-04
5.	DETAILS OF ROOF TRUSS (2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/ST-05

ELECTRICAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	ELECTRICAL LAYOUT(2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/ELEC-01
2.	ELECTRICAL SLD FOR SECURITY OFFICE (2 ND MAIN ENTRANCE GATE)	RAA/BCPL/ SECURITY OFFICE /T/ELEC-02

LIST OF DRAWINGS (PUMP HOUSE FOR BCPL TOWNSHIP)

ARCHITECTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	PLAN, ELEVATION & SECTION OF PUMP HOUSE	RAA/BCPL/ PUMP HOUSE /T/AR-01
2	DETAIL OF DOORS & WINDOWS	RAA/BCPL/ PUMP HOUSE /T/AR-02

STRUCTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	LAYOUT & DETAIL OF COLUMN & FOOTING	RAA/BCPL/ PUMP HOUSE /T/ST-01
2.	LAYOUT & DETAIL OF PLINTH BEAM	RAA/BCPL/ PUMP HOUSE /T/ST-02
3.	LAYOUT & DETAIL OF ROOF BEAM	RAA/BCPL/ PUMP HOUSE /T/ST-03

ELETRICAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	ELECTRICAL LAYOUT & ELECTRICAL SLD FOR PUMP HOUSE	RAA/BCPL/ PUMP HOUSE /T/ELEC-01

LIST OF DRAWINGS (TELECOM/IT EQUIPMENT ROOM FOR BCPL TOWNSHIP)

ARCHITECTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	PLAN, ELEVATION & SECTION	RAA/BCPL/ TELECOM/IT/T/AR-01
2	DETAIL OF DOOR & WINDOW	RAA/BCPL/ TELECOM/IT/T/AR-02

STRUCTURAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	LAYOUT & DETAIL OF COLUMN & FOOTING	RAA/BCPL/ TELECOM/IT/T/ST-01
2.	LAYOUT & DETAIL OF PLINTH BEAM	RAA/BCPL/ TELECOM/IT/T/ST-02
3.	LAYOUT & DETAIL OF ROOF BEAM	RAA/BCPL/ TELECOM/IT/T/ST-03
4.	LAYOUT & DETAIL OF SLAB	RAA/BCPL/ TELECOM/IT/T/ST-04

ELECTRICAL

No.	DRAWING TITLE	DRAWING NUMBER
1.	ELECTRICAL LAYOUT & ELECTRICAL SLD	RAA/BCPL/ TELECOM/IT/T/ELEC-01