



**Telecommunications Consultants India Limited
(A Government of India Enterprise)**

TENDER DOCUMENTS

FOR

**CONSTRUCTION OF SPECIAL CARE NEW BORN UNIT
(S.C.N.U) BUILDINGS IN 10 DISTRICT HEADQUATERS
GROUP- D IN THE STATE OF BIHAR**

NOTICE NO. TCIL/05/ 563/2/2011/Civil/GROUP-D

(TECHNICAL BID)

**Telecommunications Consultants India Ltd.
TCIL Bhawan, Greater Kailash-I
New Delhi – 110048
Phone : 91-11-26202020, Fax No. : 91-11-26242266/26241776
Email: tcil@tcil-india.com**

		INDEX / CONTENTS	PAGE NO.
SECTION	1	INVITATION	3
SECTION	2	DEFINATIONS	5
SECTION	3	INSTRUCTIONS TO THE TENDERER	7
SECTION	4	GENERAL AND COMMERCIAL CONDITIONS	14
SECTION	5	SPECIFICATION	55
SECTION	6	PROFORMA	82
SECTION	7	FORM OF AGREEMENT	87
SECTION	8	LIST OF SITES IN BIHAR	89

SECTION – 1

INVITATION

**TELECOMMUNICATIONS CONSULTANTS INDIA LTD.
(A Govt. of India Enterprise)**

NOTICE INVITING TENDER

Notice No. : **TCIL/05/563/2/2011/CIVIL/GROUP-D**

Name of the Work (Subject) : **Construction of Special Care New Born Unit (S.C.N.U) Buildings in 10 District Headquarters Group D in the State of Bihar**

Tender Category : **Civil & Electrical Works**

Sealed tenders under two bid systems are invited on behalf of State Health Society, Bihar for the above work from eligible bidders.

Eligibility criteria, detailed terms and conditions, technical specifications, bill of quantity etc. are given in the tender documents.

For detailed NIT, tender documents and Integrity Pact, please visit our website <http://www.tcil-india.com> tender documents can be downloaded from website. The tender if downloaded from Website should contain with Technical Portion of the tender a fee of Rs. 1000/- by way of DD/Cash in favour of TCIL, Payable at New Delhi. For detail contact the following:

- **Mr JAG MOHAN BATRA**
PROJECT DIRECTOR, TCIL
TEL: 0612-2599900, MOB: 09771498461
- **Mr ONKAR SINGH**
PROJECT MANAGER, TCIL
TEL: 0612-2599900, MOB: 09771498460
- **Mr Pranav Jha**
Accountant, TCIL
TEL: 0612-2599900, MOB: 08294638665

**ADDRESS: B-4, VIJAY NAGAR
RUKUNPURA, PATNA
PIN 800014 (BIHAR)**

Last date of Sale of tender is **16.11.2011**
Last date of tender submission is **17.11.2011 upto 15:00 hrs.**

**UNIT : CIVIL DIVISION
(TENDER: ATTACHMENTS ENCLOSED)**

SECTION - 2

DEFINATIONS

It is to inform you that this tender will be covered under the integrity pact program of TCIL and any agency who has signed the integrity pack with TCIL can send his grievances if any to the IEMs through the Nodal Officer in the prescribed performa. The further details are available on TCIL Website or can be obtained from undersigned.

SECTION - 2

2.0 DEFINITIONS

- 2.1 The Purchaser stands for Telecommunications Consultants India Limited, New Delhi.
- 2.2 The Tenderer stands for the party submitting a tender offer against a Tender Document.
- 2.3 The agency stands for the successful tenderer whose bid is accepted by the purchaser for placement of Purchase Order/Work Order.

Time of Completion refers to the period for **Construction of Special Care New Born Unit (S.C.N.U) Buildings in 10 District Headquarters Group –D in the State of Bihar** is 120 days.

SECTION 3

INSTRUCTIONS TO THE TENDERER

INSTRUCTION TO TENDERERS

3. Telecommunications Consultants India Limited (TCIL) is inviting you to tender for the following work with details as under :

Name of work : **Construction of Special Care New Born Unit (S.C.N.U) Buildings in 10 District Headquarters Group D in the State of Bihar**

Tender No. : **TCIL/05/ 563/2/2011/CIVIL/GROUP-D**

Estimated Cost of work : Rs.494.29 Lakhs

Last Date of Sale of Tenders : 16.11.2011 upto 17:00 hrs.

Date of receipt of Tender : 17.11.2011 by 15:00 Hrs.

Date of opening (Technical Bid) : 17.11.2011 at 16:00 Hrs.

E.M.D. (Earnest Money Deposit) : EMD for Rs. 1.98 Lakhs by D/D in favour of "TCIL", New Delhi

Time of Completion : 120 Days

Tender Box : TCIL, B-4, VIJAY NAGAR, RUKUNPURA, PATNA

Tender Fee : Rs 1000/- by DD in favour of TCIL, New Delhi

The tenders must be submitted as under :

A) Envelope – I (EMD + Tender fee if downloaded from web site + PQ Documents +Technical Bid)

E.M.D. (Earnest Money Deposit) and Technical Bid along with (PQ Documents) in a sealed envelope marked as **Envelope-1** and Super scribed "TECHNICAL BID" for **Construction of Special Care New Born Unit (S.C.N.U) Buildings in District Headquarters Group – D in the State of Bihar.**

B) Envelope –2 (Financial offer)

The Financial offer of tender documents shall be in a sealed envelope marked as **Envelope-2** , Super scribed “Financial Bid ” for **Construction of Special Care New Born Unit (S.C.N.U) Buildings in 10 District Headquarters Group-D in the State of Bihar .**

Both the envelopes should be sealed in third envelope addressed to Project Director, TCIL, B-4, VIJAY NAGAR, RUKUNPURA, PATNA and super scribed Tender for **Construction of Special Care New Born Unit (S.C.N.U) Buildings in 10 District Headquarters Group-D in the State of Bihar**

☛ **“Do not open before 17.11.2011 at 16:00 hrs.**

Unsealed tenders are liable to be rejected.

3.2 ELIGIBILITY CRITERIA

The agencies should have successfully completed similar works during last seven years ending 30th Sept, 2011 similar civil and Electrical work as per details below, (To be supported with Clients Certificates)

i) One work of similar nature valuing not less than 80% of Estimated Cost **for Civil and Electrical Work.**

OR

ii) Two works of similar nature each valuing not less than 50% of Estimated Cost.

OR

iii) Three works of similar nature each valuing not less than 40% of Estimated Cost.

Similar works means Building works only.

The working agencies who are already executing the work of Special Care New Born Unit (SCNU) Buildings under Group A, B and C in the state of Bihar need not to participate in the tender.

3.3 Average Annual financial turnover during the last 3 years (2008-09, 2009-10 & 2010-11) should not be less than 50% of Estimated Cost - in **Civil and Electrical Work.**

3.4 TIME OF RECEIPT AND OPENING OF TENDER:

Tenders will be received not later than 15:00 Hrs. on the specified date in the Tender Form. Tenders received later will be rejected even if they are

dispatched before the fixed date. The Technical Bid shall be opened on same day at 16:00 Hrs. in the presence of representatives of the agencies.

2nd envelop containing 'Financial bids' of those firms shall only be opened who fulfill the eligibility criteria CONTAINED IN TENDER DOCUMENTS. THE TECHNICALLY QUALIFIED PARTIES SHALL BE NOTIFIED OF THE DATE, TIME AND VENUE OF OPENING FINANCIAL BID

3.5 CONDITIONS:

Conditional offers are liable to be rejected. In case the contractor still wishes to state certain conditions, he can state them under compliance statement. Conditions or statements made at pages other than Compliance Statement shall not be considered contractors should therefore refrain from making comment elsewhere in the tender.

3.6 MODIFICATIONS:

Tenders must conform to such information as included conditions, specifications, lists and drawings.

No modifications shall be allowed by the tenderer otherwise he must very clearly and in full detail define on which points his offer does not meet the conditions, terms, specifications etc.

These may be stated under the relevant clauses on the compliance statement.

3.7 BASIS AND INTERPRETATION OF SIGNING THE TENDER FORM:

The signing of the Tender Form by the tenderer shall be an acceptance of all stipulations and provisions of these conditions and associated documents as an integral part of the contract. No provision in these general conditions shall be rendered in applicable except only so far as these provisions are not consistent with provisions contained in any particular specifications, and Technical Conditions, in which case the latter shall be effective provision.

- 3.8 Once dispatched/submitted shall remain irrevocable and open for acceptance for a period of 120 days from the date of opening of tenders. If any tenderer withdraws his tender before the said period or makes any modifications in the terms and conditions of the tender, which are not acceptable to the TCIL, the TCIL shall without prejudice to any other right or remedy shall be at liberty to forfeit the tender deposit absolutely.

3.9 **PRICES:**

3.9.1 The tenderer shall quote his rates in English, (both in figures as well as in words) in the schedule of quantities forming part of the tender documents in such a way that interpolation is not possible. The amount for each items shall be worked out and total given for each subgroup. Tendered amount for the work shall be entered in the tender and duly signed by the tenderer. When a tenderer signs the tender in an Indian Language, the total amount tendered in the tender documents should also be written in same language.

3.9.2 In case discrepancies are found between the rates quoted in words and figures and the amount shown in any item, the following procedure shall be followed:

- a) When there is difference between the rates in figures & words, the rate in words shall be taken as correct.
- b) When the rates quoted by the tenderer in figures and words tally but the amount is incorrect, the rate quoted by the tenderer in words shall be taken as correct.
- c) When it is not possible to ascertain the correct rates by either of the above methods, the rate quoted in words shall be taken as correct.

3.9.3 In case of figures, the words Rs. should be written before the figures of Rupees and the word P. after the decimal figures, e.g. the figures Rs. 2.15 P. in case of words should be written like rupees two and fifteen Paisa only. While quoting the rate in schedule of quantities, the word 'only' should be written closely following the amount and it should not be written in the next line.

3.10 **ACCEPTANCE OF TENDER:**

The acceptance of tender will rest with Chairman and Managing Director, TCIL who does not bind himself to accept the lowest tender and reserves to himself the authority to reject any or all of the tenders received, without assigning any reason. Tenders in which any of the prescribed conditions are not fulfilled or are incomplete in any respect are liable to be rejected.

The TCIL does not bind himself to accept the lowest or any tender and reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rates quoted.

If any tender stipulates any conditions of his own, such conditional tender is liable to be rejected.

Unsealed tenders are also liable to be rejected.

3.11 TENDER DEPOSIT:

3.11.1 The tenderer shall deposit EMD along with the tender documents, as mentioned in the General Terms & Conditions.

3.11.2 The EMD of successful tenderer shall be returned without any interest after the required performance bond has been furnished by the tenderer as per Performa attached with this documents.

3.11.3 If the successful tenderer to whom the contract is awarded refuses or neglects to sign or fails to furnish the performance bond, his EMD tender deposit shall be forfeited.

3.11.4 The EMD without any interest of unsuccessful tenderer will be returned as soon as practicable after the award of contract to successful party or termination of the validity of the tender proposal, whichever comes first.

3.11.5 Any tender without EMD (Earnest Money Deposit) is liable to be rejected.

3.12 PERFORMANCE GUARANTEE:

Validity of P.G. :

The tenderer, whose tender is accepted, will be required to furnish a security by way of performance guarantee to be issued by nationalized scheduled bank for the due fulfillment of his contract such sum as will amount to 10% of contract value, within 10 days of receipt of the award letter from TCIL. The performance guarantee shall remain valid and shall not be released before end of the maintenance period i.e. Twelve months from date of completion.

3.12 REPRESENTATION:

3.12.1 On acceptance of the bid the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-In-Charge shall be intimated to the TCIL.

3.12.2 Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.

3.13 TAXES:

3.13.1 Sales Tax, Excise duty, Royalty or any other taxes and/or duties on any matter in respect of the contract shall be payable by the contractor and TCIL will not entertain any claim whatsoever.

3.13.2 Tenderer should quote all inclusive price including the liability of turnover tax, sales tax, excise duties, works tax on contract, royalty charges and as a whole or part thereof.

3.14 DOCUMENTS COMPRISING THE TENDER:

3.14.1 The tender prepared by the tenderer shall consist of the following documents:

1. Original Tender form and price schedule
2. Power of attorney/certificates of signature of representative(s)

3.15 TENDER FORM:

The tenderer shall complete the original tender and price schedule for each sub section, indicate the unit prices and the total tender price of works for all items covered under the scope of work. In the event of any discrepancy between the unit prices and the total price, the unit prices shall prevail.

3.16 IMPLEMENTATION PLAN:

The tenderer shall submit an implementation plan to complete all the construction work in accordance with the scope of work. The implementation plan shall include an equipment engineering plan, plant engineer plan, manufacturing plan, shipping plan, equipment and material construction/ installation plan, test and commissioning plan, together with a detailed implementation time schedule showing the time sequence and estimated duration of individual items.

3.17 The tenderer may obtain further ideas and more details by visiting the site.

SECTION 4

GENERAL & COMMERCIAL CONDITIONS

SECTION – 4

GENERAL AND COMMERCIAL CONDITIONS

- 4.0 All Works shall be carried out as per CPWD Specifications in general & specified items in particular.
- 4.1 A person signing the tender form or any other documents forming part of the contract on behalf of the agency shall be deemed to warranty that he has authority to bind the agency and if it subsequently comes to light that the person so signed had no authority to do so, the purchaser may without prejudice to any other civil and criminal remedies cancel the contract or the tender and hold the agency liable for all costs, charges and damages.
- 4.2 The Purchaser may reject the whole items tendered for inspection, if after inspection of such portion, thereof as the purchaser may decide at its discretion, it is satisfied that the consignment is unsatisfactory.
- 4.3 Any supply, submitted for inspection after despatch by the agency, if on tests, by the purchaser's authorised representative, is found unsuitable and rejected, or any material submitted is found unsuitable and rejected, or any material submitted is found unfit for use, it shall be the duty of the agency, to remove the supply within 15 days from the date of intimation or rejection. In case the agency fails to remove the material within the specified period as mentioned above, the material shall lie on the agency's risk. The purchaser shall have the right to dispose off the supply which has not been lifted in the period stated above at the agency's risk and on his account.
- 4.4 The agency shall not sublet, transfer or assign the contract or any part thereof without the written permission of the purchaser.
- 4.5 Nothing extra shall be paid on account of any discrepancy in nomenclature of item. Contractor/Agency shall see the site of work before quoting the rates & seek clarifications before hand. All the taxes, duties etc. will be born by the Contractor/Agency.
- 4.5 a) Electricity and water will be supplied at a point. However the contractor/agency has to make their own arrangements for the further use.

- b) Quantities may be reduced or increased upto 25% depending on the desecration of Engineer-in-charge.
- c) The work shall be carried out as per general CPWD specifications and to the satisfaction of Engineer-in-Charge.
- d) Site shall be cleared off all dirt/dusts and debris and malba.
- e) Sample of items shall be got approved in advance before taking up the item of work.
- f) Contractor shall be responsible for watch and ward of all existing fitting and any loss due to damage/theft has to be made good at his own cost.
- g) Any cutting, overwriting etc. in tender must be initialed.
- h) Prices should be quoted in figures as well as in words. In case of difference in figures and words, prices given in words shall be considered.
- i) The Purchaser reserves the right to distribute the supply to more than one party and reduce or increase the quantity without assigning any reason.
- j) The Tender along with all other associated documents being submitted by the tenderers should be in "English" language only.

4.7 **EMD**

Each tender must be accompanied with a EMD by Pay Order/ D.D for Rs.1.98 lakhs (Rupees One lakh and Ninety Eight thousand only) in favour of T.C.I.L. Payable at New Delhi from a Scheduled Bank as E.M.D. The Tender without EMD shall be liable to be rejected.

- 4.8 EMD/Security Deposit shall not bear any interest and EMD of unsuccessful bidder will be returned after 15 days of award of work.

4.9 **PERFORMANCE BANK GUARANTEE**

The qualified Tenderer/Contractor has to submit 10% B.G. of the contract amount from the nationalized Bank and the B.G. will be released after satisfactory completion of maintenance period i.e. twelve months from date of completion.

4.10 On completion of the works in all respects, the security deposit/performance guarantee shall be refunded to the Agency without any interest, provided however, that he has cleared fully the dues, if any, of the Purchaser and upon return in good condition of any specifications, drawings samples or other property belonging to the purchaser which may have been entrusted to the agency.

4.11 TIME OF COMPLETION

All the works must be executed and commissioned and made operational within 120 days. Date of start shall be 7th day from the day of issue of Award Letter.

4.12 LIQUIDATED DAMAGES/FORFEITURE OF EMD/MONEY

The E.M.D/Security Money will stand forfeited in case of violations of any of the terms and conditions. In case the agency fails to execute the work against order, the work will be executed from other agencies at his cost and risk, the excess money if any incurred will be recovered from any dues/EMD. For delay in completion of the work, liquidated damages at 1% per week or part of a week subject to maximum limit of 5 % of the total order value will be recovered from the agency. Purchaser also reserves the right to make purchases at the cost and risk of the defaulting agency and levy liquidated damages. In case of continued delay purchaser may cancel the order and forfeit the EMD/Security Deposit.

4.13 INSPECTION

The agency will offer the material for inspection in writing to the authorized representative of Purchaser before use. Purchaser reserves the right to have the material inspected in any manner by their representative. Notwithstanding inspection as above, the agency shall furnish a Factory Test Report and Certificate that the materials are in conformity to the specifications.

4.14 WARRANTY

The agency will have to give a declaration that the material supplied to the purchaser under this tender/contract shall be of the best quality and workmanship and shall be strictly in accordance with the specifications. The agency will guarantee that the said materials would continue to conform to the description and quality for a period of 12 months from the date of final completion of the work. The agency shall undertake to replace or rectify the defects, if any, free of cost during the warranty period.

4.15 ARBITRATION

In the event of any dispute or difference arising between the purchaser and the agency in any matter covered by this contract or arising directly or indirectly there from or concerned with the said contract in any manner of the implementation of any terms and conditions of the said contract, the matter shall be referred to Sole Arbitrator nominated by CMD, TCIL whose decision shall be final and binding. The venue of Arbitration shall be New Delhi and arbitration will be conducted as per Indian Arbitration Act.

4.16 JURISDICTION OF COURTS

In case any agency wants to take the dispute to a court of law, it is clearly understood that only courts in Delhi shall have the jurisdiction.

4.17 DERIVATION RATES FOR EXTRA / SUBSTITUTED ITEMS

The Engineer-in-Charge shall have powers :

- i) to make alteration in, omissions from, additions to, or substitutions from the original specifications, drawings design and instructions that may appear to him, to be necessary during the progress of the Work, and
- ii) to omit a part of the work in case of non availability of portion of the Site or for any other reasons, and, the Contractor shall be bound to carry out the Work in accordance with instructions given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall form part of the Contract as if originally provided therein and any altered, additional or substituted work which the Contractor may be directed to do as part of the Work shall be carried out by the Contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided. The Contractor shall not carry out such works without written instructions from the Engineer-in-Charge.

4.17.1 The time for completion of the Work shall, in event of any deviations resulting in additional cost over the Contract Value being ordered, be extended, if requested by the Contractor in the prescribed Performa.

- i) in the proportion which the additional cost of the altered, additional or substituted work, bears to the Contract Value, plus,
- ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the CMD TCIL and communication of Engineer-in-Charge for such extension of period granted shall be conclusive and binding on the Contractor.

4.17.2 The rates for such additional, altered or substituted work shall be determined by the Engineer-in-Charge in accordance with the following provisions in their respective order

- i) If the rate for additional, altered or substituted item of work is specified in the Schedule of Quantities, the Contractor shall carry out the additional, altered or substituted item at the same rate. In the case of composite tenders, where two or more sub-groups as indicated in press notice inviting tender may form part of the Contract, the applicable rate shall be taken from the sub-groups of that particular part in which the deviation is involved, failing that at the lowest applicable rate for the same item of work in all the sub-groups.
- ii) If the rate for any additional, altered or substituted item of work cannot be determined in the manner specified in sub-para (i) above, then such item of work shall be carried out at the rate entered in the CPWD, Bihar **Schedule of Rates-2011 for Civil works and Latest Schedule of Rates (Part-I Internal) & Schedule of Rates (Part-II External) for Electrical works** with correction slips issued upto the date of opening of tenders plus/minus the percentage which the tendered amount bears to the estimated cost of the work.
- iii) If the rate for any altered, additional or substituted item of work cannot be determined in the manner specified in sub-paras (i) & (ii) above or the quantities have deviated beyond the deviation limit prescribed at (iv) below, the Contractor shall, within 15 days of the date of receipt of the order to carry out the said item, inform the Engineer-in-Charge of the rate which he proposes to charge for such item of work, supported by proper detailed analysis of the rate claimed notwithstanding the fact that the rates for such items exist in the tender for the main work or can be derived in accordance with

the provisions of sub clauses above. The Engineer-in-Charge shall, after giving due consideration to the rates on the basis of prevailing market rates, determine the rate. In the event of the Contractor failing to inform the Engineer-in-Charge within the stipulated period of time, the rate which he proposes to charge, the rate of such item shall be determined by the Engineer-in-Charge on the basis of market rate(s). The decision of the Engineer-in-Charge as to the prevailing market rates and quantum of materials, labour etc. involved in execution of item of work per unit of measurement shall be final and binding on the Contractor.

The Engineer-in-Charge shall, however, be at liberty to cancel his order to carryout such items or increased quantities of work by giving notice in writing to the Contractor, and arrange to carry out the work in such manner as he considers fit. But under no circumstances the Contractor shall suspend the work on the plea of non-settlement of rate(s) of item (s) falling under this clause.

- iv) The quantum of items of works set out in the tendered documents and those derived as detailed at (i) & (ii) above shall be allowed to deviate as under
 - a) For items of work relating to foundation & Plinth including basement = No Limit
 - b) For all other items of civil works in excess of original quantities = 25% of the original quantum of any item.
 - c) For all items of electrical works in excess of original quantities = 50% of the original quantum of any item.

4.18 **SUSPENSION OF WORK**

4.18.1 The Contractor shall, on receipt of the order in writing of Engineer-in-Charge, suspend the Work or any part thereof for such time and in such manner as the Engineer-in-Charge may consider necessary for any of the following reasons.

- i) On account of any default on the part of the Contractor ; or
- ii) For improper execution of the Work or part thereof for reasons other than the default of the Contractor ; or

- iii) On account of any order/instructions passed by the Govt. of India or the Court, having direct bearing on the execution of the Work.

For safety of the works or part thereof, the Contractor shall, during such period of suspension, properly protect & secure the Work to the extent necessary & carry out the instructions given in that behalf by the Engineer-in-Charge.

4.18.2 If the suspension is ordered for reasons (ii) to (iii) in the sub clause 4.18.1 above, the Contractor shall only be entitled to an extension of the time equal to the period of every such suspension plus 25% thereof. The Contractor shall not be eligible to claim any compensation by way of watch & ward, hire charges of Tools & Plants, Establishment expenses loss of profit etc.

4.19 Termination of Contract

The TCIL may, by not less than thirty(30) days' written notice of termination to the Agency such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (f) of this Clause 4.20, terminate this Contract.

- (a) If the Agency fail to remedy a failure in the performance of their obligations hereunder, as specified in a notice of suspension pursuant to Clause 4.18 hereinabove, within fifteen (15) days of receipt of such notice of suspension or within such further period as the TCIL may have subsequently approved in writing.
- (b) If the Agency become insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary.
- (c) If the Agency fail to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 4.15 hereof.
- (d) If the Agency submit to the TCIL a statement which has a material effect on the rights, obligations or interests of the TCIL and which the Agency know to be false or undertake any activity which has adverse material effect on the rights, obligations or the interest of the TCIL.

- (e) If as the result of Force Majeure, the Agency are unable to perform a material portion of the Services for a period of not less than thirty (30) days; or
- (f) If the TCIL, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.

4.20 INSURANCE

Insurance during the Construction Period:

The Employer (TCIL) shall purchase and maintain during the construction period in the joint names of TCIL and Government of Bihar, the following policies:-

- A. Comprehensive Builders / Contractors All Risk Insurance Policy
- B. Comprehensive third party liability insurance including injury or death to personnel of persons who may enter the project site.
- C. Workmen's Compensation Insurance
- D. Any other insurance that may be considered necessary by Government of Bihar to protect the Concessionaire (TCIL) its employees and its assets (again loss, damage or destruction at replacement value) including all Force Majeure events that are insurable and not otherwise covered in items A to D.
- E. All the Insurance covers not covered under A to D but are required in accordance with the Concession Agreement between Concessionaire and the Government of Bihar.
- F. The above insurance cover shall come into effect after receipt of material at site. The transit insurance if any, is to be arranged by the contractor.
- G. Recovery @ 0.70% of each stage payment shall be made on account of insurance policy taken by TCIL.

Application of Insurance Proceeds:

Subject to provisions of financing documents, all moneys received under insurance policy except life and injury shall be paid to the

contractor. During pending of claims contractor shall repair or renovate or restore or substitute any project facility or any part thereof which may have been damaged or destroyed.

Such repair or restoration or renovation or substitution be as far as possible in the same condition as they were before such damage or destruction.

The Contractor shall seek the written consent of employer before commencing any repair, replacement, reinstatement or reconstruction of the works relating to the project facility to the extent the same requires rectification of any losses or damage which is insured under any insurance required to be taken by the Employer under the provisions of concession agreement between TCIL and Government of Bihar

4.21 **PAYMENTS**

4.21.1 Record & method of measurements.

- a) The Engineer-in-Charge shall, except as otherwise stated, ascertain and determine by measurement the value of the work done in accordance with the Contract.
- b) All items forming part of the Schedule of Quantities whether having a financial value or not, shall be entered in measurement Book, level book, etc. prescribed by the TCIL so that a permanent and complete record is maintained of all the Work executed under the Contract.
- c) Measurements may be taken jointly by the Engineer-in-Charge or his authorized representative and by the Contractor or his authorized representative. The Measurements shall be recorded and signed with date by both parties.
- d) Before taking measurements of any work, the Engineer-in-Charge or his authorized representative shall give reasonable notice to the Contractor. If the Contractor fails to attend or send authorized representative for measurements after such a notice or fails to accept or to record the objection within a week from the date of measurements, then in any such event measurements taken by the Engineer-in-Charge or by his authorized representative shall be taken to be correct measurements of the Work and shall be binding on the Contractor.
- e) Except where any general or detailed description of the work in schedule of quantities expressly shows to the contrary, schedule of

quantities shall be deemed to have been prepared and measurement shall be taken in accordance with the procedure set forth in the schedule of rates/Specifications applicable for the Work. In case certain items approved for execution are not covered by the Schedule of Rates/Specifications, measurements shall be taken in accordance with the relevant CPWD specifications or if the same is not covered therein then in accordance with the Standard Method of Measurement issued by the Bureau of Indian Standards.

4.21.2 PAYMENT ON ACCOUNT (Back to Back basis).

- a) Running account (RA) Bills shall be submitted by the Contractor in prescribed form periodically for the Work executed provided it is not less than 10% of awarded amount. The Engineer-in-Charge shall then arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements of the Work. If the Contractor does not submit the bill, the Engineer-in-Charge may depute within seven days his representative to measure up the said Work in presence of the Contractor or his representative who shall accept the measurement and the Engineer-in-Charge may prepare a bill from such measurements.
- b) Payment on account shall be made by the TCIL after the Engineer-in-Charge certifies the sum to which the Contractor is considered entitled by way of interim payment for the following.
 - i) For the works executed, after deducting there from the amounts already paid, as well as the advances & other amounts as may be deductible or recoverable as per the terms of the Contract.
 - ii) RA bill amount shall be paid within 15 days of submission of bill.

4.21.3 Final Bill

The Final Bill shall be submitted by the Contractor within one month of physical completion and handing over of the building. No further claims shall be made by the Contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payment of those items of the bill in respect of which there is no dispute for quantities and at rates as approved by Engineer-in-charge shall be made within six months from date of receipt of the bill by the TCIL The Contractor shall submit list of disputed items within 90 (ninety) days from the payment of final bill

& if he fails to do so, his claim shall be deemed to have been waived and absolutely extinguished.

4.21.3 Payment Terms.

The receipt of payments made on account of a work, when executed by a firm, must be signed by a person holding the power of attorney in this respect.

1. Payment terms to Contractor shall be on back to back basis i.e. payment shall become due to contractor on receipt of corresponding payment by TCIL for the works done by Contractor.
2. TCIL shall raise bills on CLIENT i.e. State Health Society, Bihar on the basis of progress bills raised by Contractor on TCIL.
3. TCIL shall pay a mobilization advance of 10% of the contract value to Contractor against clean Bank Guarantee from nationalized bank/Schedule bank in New Delhi acceptable to TCIL for equivalent amount subject to receipt of corresponding advance from State Health Society Bihar. The advance shall be adjusted proportionately for each work progress Bill.
4. On TCIL raising bills on CLIENT i.e. State Health Society, Bihar for the corresponding work done by Contractor, to meet working capital requirement, Contractor may draw upto 75% of value of work certified on account payment against Bank Guarantees. The adhoc advance so drawn shall be adjusted along with the interest at SBI Base Rate + 6.25% on receipt of payments from Client i.e. State Health Society, Bihar.
5. Payment will be made within 15 days of submission of RA Bill and subject to receipt of corresponding payment from State Health Society, Bihar.
6. In addition to Performance Bank Guarantee of 10% an amount equivalent to 5% of the bill value shall be deducted from regular bills as performance security for accuracy of bills and for specification of works and design and quantities submitted and the same will be released within a month after completion of works and handing over the project and records and final acceptance of report. Performance Bank Guarantee will be released after defect completion of defect liability period.

4.22 CONTRACTOR'S LABOUR REGULATIONS

1. These regulations may be called Model Contractors Labour Regulations.

2. DEFINITION

In these regulations, unless otherwise expressed or indicated, the following words and expression shall have the meaning hereby assigned to them:

- a) "Labour means workers employed by a contractor, directly, indirectly through a sub-contractor, or by an agent on his behalf to do any skilled, semi-skilled or unskilled manual, supervisory, technical or clerical work.
- b) "Fair Wage" means wages, which shall include wages for weekly day of rest and other allowances, whether for time or piece work, after taking into consideration prevailing market rates for similar employments in the neighborhood but shall not be less than the minimum rates of wages fixed under the payment of Minimum Wages Act.
- c) "Wages" shall have the same meaning as defined in the Payment of Wages Act.
- d) "Contractor" for the purpose of these regulations shall include an agent or sub-contractor employing labour on the work taken on the Contract.
- e) "Inspecting Officer" means any Labour Enforcement Officer, or Assistant Labour Commissioner of the Chief Labour Commissioner's Organization.
- f) "Form" means a form appended to these Regulations.

3. NOTICE OF COMMENCEMENT

The contractor shall within SEVEN days of commencement of the work, furnish in writing to Inspecting Officer of the area concerned the following information:

- a) Name and Situation of the work.
- b) Contractor's name and address.
- c) Particulars of the Department for which the work is undertaken.
- d) Name and address of sub-contractor(s) as and when they are appointed.
- e) Commencement and probable duration of the work.

- f) Number of workers employed and likely to be employed.
- g) 'Fair wages' for different categories of workers.
 - i) Number of hours of work to constitute a normal working day.

The number of hours which shall constitute a normal working day for an adult shall be NINE hours. The working day of an adult worker shall be so arranged that it is inclusive of intervals, if any, for rest it shall not spread over more than twelve hours on any day. When an adult worker is made to work for more than NINE hours on any day or for more than FORTY EIGHT hours in any week, he shall, in respect of overtime work, be paid wages at double the ordinary rate of wages.

- ii) Weekly day of rest: Every worker shall be given a weekly day of rest which shall normally be a Sunday unless otherwise fixed and notified at least TEN days in advance. A worker shall not be required or allowed to work on the weekly rest day unless he has or will have a substituted rest day, on one of the five days immediately before or after the rest day, provided that no substitution shall be made which will result in the worker working for more than ten days consecutively without a rest day for a whole day.

- 4. Where in accordance with the foregoing provisions a worker works on the rest day and has been given a substituted rest day he shall be paid wages for the work done on the weekly rest day at the overtime rate of wages.

(Note: The expression 'ordinary rate of wages' means the fair wage the worker is entitled to)

5. DISPLAY OF NOTICE REGARDING WAGES, WEEKLY DAY OF REST ETC.:

The Contractor shall, before the commencement of his work on the Contract, display and correctly maintain and continue to display and correctly maintain in a clean and legible condition in conspicuous places on the works, notice in English and in the local Indian Languages, spoken by majority of workers, giving the rate of fair wages, the hours of work for which such wages are payable, the weekly rest days workers are entitled to and name and address of the inspecting Officer. The Contractor shall send a copy each of such notices to the inspecting Officers.

5.1 Fixation of Wage Periods

The Contractor shall be fix wage period in respect of which wages shall be payable. No wage period shall normally exceed one month.

5.2 Payment of Wages:

- i) Wages due to every worker shall be paid to him direct. All wages shall be paid in current coins or currency or in both. The wages shall be paid without any deductions of any kind except those specified by Central Government by General Order or Special Order in this behalf permissible under the payment of wages act.
- ii) The Wages of every worker employed as contractor labour in an establishment or by Contractor where less than one thousand, such persons are employed shall be paid within SEVEN days from end of the Wage period; and in other cases before the expiry of the 10th day from the end of the wage period in respect of which the wages are payable.
- iii) When employment of any worker is terminated by or on behalf of the Contractor, the wages earned by him shall be paid before expiry of the second working day, from the date on which his employment is terminated.
- iv) All payment of wages shall be made at the work site on a working day except when the work is completed before expiry of the wage period, in which case final payment shall be made at the work site within 48 hours of the last working day and during normal time.

Note: The term “working day” means a day on which labour is employed, and the work is in progress.

7. REGISTER OF WORKMEN

A register of workmen shall be maintained in the Form appended to these regulations and kept at the work site or as near to it as possible, and the relevant particulars of every workmen shall be entered therein within THREE days of his employment.

8. EMPLOYMENT CARD

The Contractor shall issue an employment card in the Form appended to these regulations to each worker on the day of work or entry into his employment.

If a worker already has any such card with him issued by the previous employer, the Contractor shall merely endorse that Employment Card with relevant entries. The Contractor may, alternatively, issue an attendance-cum-wage slip to each worker in the form appended. This card shall be valid for a wage period. The Contractor shall mark, attendance on the cards twice each day and again after the rest interval, before he actually starts the work. On termination of employment the Employment Card shall again be endorsed by the Contractor, service certificate issued and returned to the Worker.

9. REGISTER OF WAGES ETC.:

- i) A register of Wages-cum-Muster Roll in the Form appended to these regulations shall be maintained and kept at the work site or as near to it as possible.
- ii) A wage slip in the Form appended to these regulations shall be issued to every worker employed by the Contractor at least a day prior to disbursement of wages.

10. FINES AND DEDUCTIONS WHICH MAY BE MADE FROM WAGES

- i) Wages of a worker shall be paid to him without any deductions of any kind except the following:
 - a) Fines;
 - b) Deduction for absence from duty; i.e. from the place of his employment he is required to work. The amount of deductions shall be in proportion to the period for which he was absent ;
 - c) Deduction for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money which he is required to account for, where such damage or loss is directly attributable to his neglect or default ;
 - d) Deductions for recovery of advances or for adjustment of overpayment of wages. Advance granted shall be entered in a register; and
 - e) Any other deduction, which the HEALTH SOCIETY, BIHAR may from time to time allow.
- ii) No fines shall be imposed on any worker say in respect of such acts and omissions on his part as have been approved by the Chief Labour Commissioner or Competent Authority.

- iii) No fine shall be imposed on a worker and no deductions for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.
- iv) The total amount of fines which may be imposed in any one wage period on a worker shall not exceed an amount equal to three Paise in a rupee of the wages payable to him in respect of that wage period.
- v) No fine imposed on a worker shall be recovered from him in installments, or after expiry of sixty days from the date on which it was imposed. Every fine shall be deemed to have been imposed on the day of the act or omission in respect of which it was imposed.
- vi) The Contractor shall maintain both in English and the local Indian language a list, approved by the Chief Labour Commissioner or Competent Authority clearly stating the acts and omissions for which penalty or fine may be imposed on a workman and display it in good condition in a conspicuous place on the work site.
- vii) The Contractor shall maintain a register of fines and the register of deductions for damage or loss in the Forms appended to these regulations which should be kept at the place of work.
- viii) The Contractor shall display in a conspicuous place of work the list of acts and omissions for which the fines can be imposed. These are as under:-
 - a. Willful insubordination or disobedience, whether alone or in combination with other.
 - b. Theft, fraud or dishonesty in connection with the Contractors beside a business or property of HEALTH SOCIETY, BIHAR.
 - c. Taking or giving bribes or any illegal gratification.
 - d. Habitual late attendance.
 - e. Drunkenness, fighting, riotous or disorderly or different behaviour.
 - f. Habitual negligence.
 - g. Smoking near or around the area where combustible or other materials are locked.
 - h. Habitual indiscipline.

- i. Causing damage to work in the progress or to property of the Health Society Bihar or of the Contractor.
- j. Sleeping on duty.
- k. Malingering or slowing down work.
- l. Giving of false information regarding name, father's name etc.
- m. Habitual loss of wage cards supplied by the employers.
- n. Unauthorised use of employer's property of manufacture or making of unauthorised articles at the work place.
- o. Bad workmanship in construction and maintenance by skilled workers which is not approved by the HEALTH SOCIETY, BIHAR and for which the Contractor is compelled to undertake rectifications.
- p. Making false complaints and/or misleading statements.
- q. Engaging on trade within the premises of the establishments.
- r. Any unauthorized divulgence of business affairs of the employees.
- s. Collection or canvassing for the collection of any money within the premises of an establishment unless authorised by the employer.
- t. Holding meeting inside the premises without previous sanction of the employers.
- u. Threatening or intimidating any workmen or employer during the working hours within the premises.

11. REGISTER OF ACCIDENTS

The Contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars:

- a) Full particulars of the labourers who met with accident.
- b) Rate of Wages.
- c) Sex
- d) Age

- e) Nature of accident and cause of accident.
- f) Time and date of accident.
- g) Date and time when admitted in Hospital.
- h) Date of discharge from the Hospital.
- i) Period of treatment and result of treatment.
- j) Percentage of loss of earning capacity and disability as assessed by Medical Officer.
- k) Claim required to be paid under Workmen's Compensation Act.
- l) Date of payment of compensation.
- m) Amount paid with details of the person to whom the same was paid.
- n) Authority by whom the compensation was assessed.
- o) Remarks.

12. PRESERVATION OF REGISTERS

The Register of workmen and the Register of Wages-cum-Master Roll required to be maintained under these Regulations shall be preserved for 3 years after the date on which the last entry is made therein.

13. ENFORCEMENT

The Inspecting Officer shall either on his own motion or on a complaint received by him, carry out investigations, and send a report to the Engineer-in-Charge specifying the amounts representing Worker's dues and amount of penalty to be imposed on the Contractor for breach of these Regulations, that have to be recovered from the Contractor, indicating full details of the recoveries proposed and the reasons therefor. It shall be obligatory on the part of the Engineer-in-Charge on receipt of such a report to deduct such amounts from payments due to the Contractor.

14. DISPOSAL OF AMOUNTS RECOVERED FROM THE CONTRACTOR

The Engineer-in-Charge shall arrange payment to workers concerned within FORTY FIVE days from receipt of a report from the Inspecting Officer except in cases where the Contractor had made an appeal under Regulation 16 of these Regulations. In cases where there is an appeal, payment of workers dues would be arranged by the Engineer-in-Charge,

wherever such payment arise, within THIRTY days from the date of receipt of the decision of the Regional Labour Commissioner (R.L.C.)

15. WELFARE FUND

All moneys that are recovered by the Engineer-in-Charge by way of workers dues which could not be disbursed to workers within the time limit prescribed above, due to reasons such as where about of workers not being known, death of a worker(s), etc. and also amounts recovered as penalty, shall be credited to a Fund to be kept under the custody of the TCIL for such benefit and welfare of workmen employed by the Contractor.

16. APPEAL AGAINST DECISION OF INSPECTING OFFICER

Any person aggrieved by a decision of the Inspecting Officer may appeal against such decision to the Regional Labour Commissioner concerned within THIRTY days from the date of the decision, forwarding simultaneously a copy of his appeal to the Engineer-in-Charge. The decision of the Regional Labour Commissioner shall be final and binding upon the Contractor and the workmen.

17. REPRESENTATION OF PARTIES:

- i) A workmen shall be entitled to be represented in any investigation or enquiry under these Regulations by an officer of a registered trade union of which he is a member or by an officer of a Federation of Trade Unions to which the said trade union is affiliated or where the workmen is not a member of any registered trade union, by an officer of a registered trade union, connected with, or by any other workman employed in, the industry in which the worker is employed.
- ii) A contractor shall be entitled to be represented in any investigation or enquiry under these Regulations by an officer of an Association of Contractor's of which he is a member or by an officer of a Federation of Association of Contractors to which the said association is affiliated or where the Contractor is not a member of any Association of Contractors, by an officer of association of employers, connected with, or by any other employer engaged in, the industry in which the Contractor is engaged.
- iii) No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under these Regulations.

18. MATERNITY BENEFITS FOR FEMALE EMPLOYEES

The Contractor shall extend the leave, pay and other benefits as admissible to the female employees. No maternity benefits shall be admissible to a female worker unless she has been employed for a total period of not less than 6 months immediately proceeding the date on which she proceeds on leave. The Contractor shall maintain a register of maternity benefits in prescribed form, and shall be kept in all the places of work.

19. INSPECTION OF BOOKS AND OTHER DOCUMENTS

The contractor shall allow inspection of the Registers and other documents prescribed under these Regulations by Inspected Officers and the Engineer-in-Charge or his authorised representative at any time and by the worker or his agent on receipt of due notice at a convenient time.

20. SUBMISSIONS OF RETURNS

The contractor shall submit periodical returns as may be specified from time to time.

21. INTERPRETATION ETC.

On any question as to the application interpretation or effect of these Regulations, the decision of the Chief Labour Commissioner or Deputy Chief Labour Commissioner (Central) shall be final and binding.

22. AMENDMENTS

Central Government/ TCIL may, from time to time, add to or amend these Regulations and issue such directions as it may consider necessary for the proper implementation of these Regulations or for the purpose of removing any difficulty which may arise in the administration thereof.

Register of Workmen Employed by Contractor
(Regulation 7)

- i) Name and address of the contractor
- ii) Name and date of the Contract
- iii) Name and address of the Department awarding the Contract
- iv) Nature of the Contract and location of the work
- v) Duration of the Contract

<u>Employment - cum - Service Card</u> (Regulation 8)	<u>Register of Workmen Employed by Contractor</u> (Regulation 7)										
	S . No	Name and surname	Age and Sex	Father's / Husband's name	Nature of employment/ designation	Permanent home address of Employee (Village Dist.	Present addresses	Date of commencement of employment	Date of termination or leaving of	Signature or thumb impression of	Remarks
12	1	2	3	4	5	6	7	8	9	10	11

N.B. :
For a

S. No.	Name & address of employer (specify whether a	Particulars of location of work site and description	Total period for which the worker is employed	Actual Number of days worked	Leave taken (No. of days should be	Nature of work done by the worker	Wage Period	Wage rate with particulars of unit in case of	Total wage earned by the worker during the	Remarks
1	2	3	4	5	6	7	8	9	10	11

Register of Wages-cum-Muster Roll

(Regulation 9)

- i) Name and address of the contractor
- ii) Name and date of the Contract
- iii) Name and address of the Department awarding the Contract
- iv) Nature of the Contract and location of the work
- v) Duration of the Contract

S.No.	Name and Surname of Father's / Husband 's Name Sex	Designation / Nature of work	Fair Wages Payable	Wages Paid	Over time Worke	Deduction from Wages		Net wages payable	Date of payment														
						Basic	Total wages paid			Fine	Date of payment												
			D.A. & Order	D.A. & Other	No. of	Deduction for damage or loss Signature		Other Deduction	Remarks														
					Over time wages																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Total attendance units																							

Register of Fines
[Regulation No. 10 (VII)]

- i) Name and address of the contractor
- ii) Name and address of the Department awarding the Contract
- iii) Nature of the Contract and location of the work
- iv) Name and address of Principal Employer

S. No.	Name	Father's / Husband's Name	Designation / Nature of employment	Nature and date of the offence for which fine imposed	Whether workman showed cause against fine or not, if so, enter date	Wage period & wages payable	Date & amount of fine imposed	Date on which fine realized	Remarks
1	2	3	4	5	6	7	8	9	10

Wage Card

Wage Card No.

Wage Card

Name and address of contractor

Date of Issue

Name of the Contract and location of work
Designation

Name and address of workman

Month / Fortnight

Rate of Wages

Rate

..... Amount

2	4	5	6	7	8	9	10	11	1	13	14	15	16	17	18	19	20	21	22	23	24	25	26	2	28	29	30	31
---	---	---	---	---	---	---	----	----	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	---	----	----	----	----

Morning
Rate

Evening Amt.

Initial

Received from wages
on account of my

the sum of Rs.

The wages card is valid for one month from the date of issue

Signature

Wages Slip

(Reverse of Wage Card)
(Regulation 9)

- i) Name of the contractor -----
- ii) Place -----

- 1. Name of the Worker with Father's/Husband's name -----
-
- 2. Nature of employment -----
- 3. Wage Period -----
- 4. Rate of Wages Payable -----
- 5. Total attendance/Unit of work done -----
- 6. Dates on which overtime worked -----
- 7. Overtime Wages -----
- 8. Gross Wages Payable -----
- 9. Total Deductions (indicating nature of deductions) -----
-
- 10. Net Wages Payable

Contractor Signature

Employees Signature /

Register of Deduction for Damages or Loss Caused to the TCIL by the Neglect of Default of the Employed Persons

(Regulation No. 10 (vii))

S. No.	Name	Father's / Husband's Name	Sex	Department	Damage or loss caused with date	Whether worker showed cause against deduction if	Date & amt. of deduction imposed	Number of installation if any	Date on which total amt.. realised	Remarks
1	2	3	4	5	6	7	8	9	10	11

4.23 MODEL RULES FOR LABOUR WELFARE

1. DEFINITION

- a) 'Work place' means a place at which, on an average, twenty or more workers are employed on any day during the period during which the contract work is in progress.
- b) 'Large Workplace' means a place at which, on an average, 500 or more workers are employed.

2. FIRST-AID

- i) At every work place there shall be provided and maintained in a readily accessible place First Aid Appliances including an adequate supply of sterilized dressings and sterilized cotton wool as prescribed in the Factory Rules of the State in which the work is carried on. The appliances shall be kept in good order and, in large work-places, they shall be placed under the charge of a responsible person who shall be trained in First Aid Treatment and who shall also be readily available during working hours. The First Aid Boxes at the rate of not less than one box for 150 contract labour or part thereof shall be ordinarily employed. Adequate arrangement shall be made for immediate recoupment of items/equipment when necessary.
- ii) At large workplaces, where hospital facilities are not available within easy distance of the Works First Aid Posts shall be established and be run by a trained compounder.

Where large workplaces are remotely situated and far away from regular hospitals, an indoor ward shall be provided with one bed for every 250 employees.

Where large workplaces are situated in cities, towns or in their suburbs and no beds are considered necessary owing to proximity of city or town hospitals, suitable transport shall be provided to facilitate removal of urgent cases to these hospitals. At other workplaces, some conveyance facilities shall be kept readily available to take injured person or persons suddenly taken seriously ill, to the nearest hospital.

At large workplaces there shall be provided and maintained an ambulance room of the prescribed sizes, containing the prescribed equipment and in the charge of such medical and nursing staff as may be prescribed. For this purpose the relevant provisions of the Factory Rules of the State Government of the area where the work is carried on may be taken as the prescribed standard.

3. ACCOMMODATION FOR LABOUR

The Contractor shall during the progress of the Works provide, erect and maintain necessary temporary living accommodation and ancillary facilities for labour at his own expense and to standard and scales as approved by the Engineer-in-Charge. However, following specifications shall be followed.

- a)
 - i) The minimum height of each hut at the eaves level shall be 2.10m (7 ft.) and the floor area to be provided will be at the rate of 2.7 sq.m (30 sq.ft) for each member of the worker's family staying with the labourer.
 - ii) The Contractor shall in addition construct suitable cooking places having a minimum area of 1.80 m x 1.50 m (6' x 5') adjacent to the hut for each family.
 - iii) The Contractor shall also construct temporary latrines and urinals for the use of the labourers, each on the scale of not less than four per each one hundred of the total strength. Separate latrines and urinals be provided for women.
 - iv) The Contractor shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These washing and bathing places shall be suitably screened.
- b)
 - i). All the huts shall have walls of sun-dried or burnt-bricks laid in mud mortar or other suitable local material as may be approved by the Engineer-in-Charge. In case of sundry bricks, the walls should be plastered with mud gobri on both sides. The floor may be katcha but plastered with mud gobri and shall be atleast 15 cm (6") above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge and the Contractor shall ensure that throughout the period of the occupation the roofs remain water-tight.
 - ii) The Contractor shall provide each hut with proper ventilation.
 - iii) All doors, windows and ventilators shall be provided with suitable leaves for security purposes.
 - iv) There shall be kept an open space atleast 7.2 m (8 Yards) between the rows of huts which may be reduced to 6 m (20 ft.) according to the availability of site with the approval of

the Engineer-in-Charge. Back to Back construction will be allowed.

4. DRINKING WATER

In every work place, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.

Where drinking water is obtained from an Intermittent public water supply, each work place shall be provided with storage where drinking water shall be stored.

Every water supply storage shall be at a distance of not less than 15 meters from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well, which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and waterproof.

A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

5. WASHING AND BATHING PLACES

Adequate washing and bathing places shall be provided separately for men and women. Such places shall be kept in clean and drained condition.

6. SCALE OF ACCOMMODATION IN LATRINES AND URINALS

There shall be provided within the precincts of every workplace latrines and urinals in an accessible place, and the accommodation, separately for each of these, shall not be less than at the following scales:-

No. of seats

- a) Where number of persons does not exceed 502
- b) Where number of persons exceeds 50 but does not exceed 1003
- c) For additional persons 3 per 100 or part thereof

In particular cases, the Engineer-in-Charge shall have the power to increase the requirement, where necessary.

7. LATRINES AND URINALS

Except in workplaces provided with water flushed latrines connected with a water-borne sewage system, all latrines shall be provided with receptacles on dry-earth system which shall be cleaned at least four times

daily and at least twice during working hours and kept in strictly sanitary condition. Receptacles shall be tarred inside and outside at least once a year.

If women are employed, separate latrine and urinals, screened from those for men and marked in the vernacular in conspicuous letters "For women only" shall be provided on the scale laid down in rule 6. Those for men shall be similarly marked "For Men Only" A poster showing the figure of a man and of a women shall also be exhibited at the entrance to latrines for each sex. There shall be adequate supply of water close to latrines and urinals.

8. CONSTRUCTION OF LATRINES

Inside walls shall be constructed of masonry or other non-absorbent material and shall be cement-washed inside and outside at least once a year. The dates of cement washing shall be noted in a register maintained for the purpose and kept available for inspection. Latrines shall have at least thatched roof.

9. DISPOSAL OF EXCRETA

Unless otherwise arranged for by the local sanitary authority, arrangement for proper disposal of excreta by incineration at the workplace shall be made by means of a suitable incinerator approved by the local medical, health and municipal or cantonment authorities. Alternatively excreta may be disposed off by putting a layer of night soils at the Bottom of pucca tank prepared for the purpose and covering it with a 15 cm layer of waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn into manure).

The Contractor shall, at his own expense, carry out all instruction issued to him by the Engineer-in-Charge to effect proper disposal of soil and other conservancy work in respect of Contractor's work-people or employees on the Site. The Contractor shall be responsible for payment of any charges which may be levied by municipal or cantonment authority for execution of such work on his behalf.

10. PROVISION OF SHELTER DURING REST

Every workplace shall be provided, free of cost, four suitable sheds, two for males and two others for rest separately for use of men and women Labour. Height of each shelter shall not be less than 3 meters from the floor level to the lowest part of the roof. Sheds shall be kept clean and the space provided shall be on the basis of least 0.5 sq.m. per head.

11. CRECHES

At a place, at which 20 or more women workers are ordinarily employed, there shall be provided at least one hut for use of children under the age of six years belonging to such women. Huts shall not be constructed to a

standard lower than that of thatched roof, mud floor and wall with wooden planks spread over mud floor and covered with matting.

Huts shall be provided with suitable and sufficient openings, for light and Ventilation. There shall be adequate provision of sweepers to keep the places clean. There shall be two dais in attendance. Sanitary utensils shall be provided to the satisfaction of local medical, health and municipal or cantonment authorities. Use of huts shall be restricted to children, their attendants and mothers of children.

Where the number of women workers is more than 25 but less than 50, the Contractor shall provided at least one hut and one Dai to look after children of women workers.

Size of creche(s) shall vary according to the number of women workers employed.

Creche(s) shall be properly maintained and necessary equipment like toys, etc. provided.

12. CANTEEN

A cooked food canteen on a moderate scale shall be provided for the benefit of workers wherever it is considered necessary.

- 13.** Planning, setting and erection of the above mentioned structures shall be approved by the Engineer-in-Charge and the whole of such temporary accommodation shall at all times during the progress of the works be kept tidy and in a clean and sanitary condition as per requirements of the local bodies and to the satisfaction of the Engineer-in-Charge and at the Contractor's expenses. The Contractor shall conform generally to sanitary requirement of local medical, health and municipal or cantonment authorities and all times adopt such, precautions as may be necessary to prevent soil pollution of the site.

14. PRECAUTIONS

The Contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Engineer-in-Charge, including filling up any borrow pits which may have been dug by him.

15. ENFORCEMENT

The Inspecting Officer mentioned in the Contractor Labour Regulations or any other officer nominated on his behalf by the Engineer-in-Charge shall report to the Engineer-in-Charge all cases of failure on the part of the Contractor and / or his sub-contractors to comply with the provisions of these Rules either wholly or in part and the Engineer-in-Charge shall impose such fines and other penalties as are prescribed in the conditions.

16. INTERPRETATIONS, ETC. :

On any question as to the application, interpretation of effect of these Rules, the decision of the Chief Labour Commissioner or Deputy Chief Labour Commission (Central) shall be final and binding.

17. AMENDMENTS

Government/ HEALTH SOCIETY, BIHAR may, from time to time, add to or amend these Rules and issue such directions as it may consider necessary for the proper implementation of these Rules or for the purpose of removing any difficulty which may arise in the administration thereof.

4.24 MODEL SAFETY CODE

1. Suitable scaffolds shall 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 materials as well suitable footholds and handhold shall be provided on the ladder and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and 1 vertical.)
2. Scaffolding of staging more than 3.60m above the ground or floor, swing or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1m high above the outside and ends thereof with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
3. Working platform, gangways and stairways shall be so constructed that do not sag unduly or unequally; and if a height of a platform or the gangway or stairway is more than 3.60 m above ground level or floor level it shall be closely boarded, have adequate width and be suitably fenced, as described in 2 above.
4. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of 1 meter.
5. Safe means of access shall be provided to all working platform and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m, in length, width between side rails in rung ladder shall in no case be less than 30 cm for ladders upto and including 3 m in height. For longer ladders this width shall be increased at least 6mm for each additional 30 cm of length. Uniform step spacing shall not exceed 30 cm.

Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the site shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accidents and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any persons for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person or which may the consent of the contractor, be paid to compromise any claim by such person.

6. Excavation and Trenching – all trenches 1.2 m. or more in depth, shall at all times be supplied with at least one ladder for each 20m. in length or fraction thereof. Ladder shall be extend from bottom of the trench to at least 1m above surface of the ground. Sides of a trench which is 1.5 m. or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. Excavated materials shall not be placed within 1.5 m. of edge of trench or half of depth of trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances shall undermining or undercutting be done.
7. Demolition – Before any demolition work commences and also during the process of the work,
 - a) All roads and open areas adjacent to the work site shall either be closed or suitably protected.
 - b) No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.
 - c) All practical steps shall be taken to prevent danger to persons employed, from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.
8. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge shall be available for use of the persons employed on the Site and maintained in a condition suitable for immediate use, and the Contractor shall take adequate steps to ensure proper use of equipment by those concerned:-
 - a) Workers employed on mixing asphaltic materials, cement and lime mortars/concrete shall be provided with protective footwear and protective goggles.
 - b) Those engaged in handling any material which is injurious to the eyes shall be provided with protective goggles.
 - c) Those engaged in welding works shall be provided with welder's protective eye-shields.
 - d) Stone breaker 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 active use, the contractor shall ensure that the following safety measures are adhered to:-
 - i) Entry for workers into the line shall not be allowed except under supervision of the representative of the Engineer-in-

Charge or any other officer/official of the HEALTH SOCIETY, BIHAR.

- ii) At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.
- iii) Before entry presence of Toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.
- iv) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.
- v) Safety belt with rope should be provided to the workers, while inside the manholes. Such rope should be handled by two men standing outside to enable him to be pulled out during emergency.
- vi) The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works undertaken during night or day.
- vii) No smoking or open flames be allowed near the blocked manhole being cleaned.
- viii) The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.
- ix) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-in-Charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.
- x) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.
- xi) Air-blowers should be used for flow of fresh air through the manholes whenever called for. Portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type.

Non sparking gas engines also could be used but they should be placed at least 2 meters away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.

- xii) The workers engaged for cleaning the manholes/sewers should be properly trained before allowing to work in the manhole.
 - xiii) The workers shall be provided with Gumboots or non sparking shoes, bump helmets and gloves non sparking tools, safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.
 - xiv) Workmen descending a manhole shall try each ladder step or rung carefully before putting his full weight on it to guard against insecure fasting due to corrosion of the rung fixed to manhole wall.
 - xv) If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.
 - xvi) The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps in this regard to be taken in an individual case will be final.
- f) The Contractor shall not employ men and women below the age of 18 years on the work of painting with products containing lead in any form. In such works, the following precaution should be taken:-
- i) No paint containing lead or lead products shall be used except in the form of paste or ready made paint.
 - ii) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray on a surface having lead paint dry rubbed and scrapped.
 - iii) Overalls shall be supplied by the contractor to the workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
 - iv) 1.a) White lead, sulphate of lead or product containing these pigment, shall not be used in

painting operation except in the form of pastes or paint ready for use.

- b) Measures shall be taken, wherever required in order to prevent danger arising from the application of a paint in the form of spray.
 - c) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.
- 2.a) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
- b) Overall shall be worn by working painters during the whole of working period.
 - c) Suitable arrangement shall be made to prevent clothing put off during, working hours being spoiled by painting materials.
- 3.a) Cases of lead poisoning and suspected lead poisoning shall be notified and shall be subsequently verified by medical man appointed by the Engineer-in-Charge.
- b) The Engineer-in-Charge may require, when necessary medical examination of workers.
4. Instructions with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.
- 9.** When the work is done near any place where there is risk of drowning, all necessary equipments 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.
- 10.** Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards of conditions:-
- a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept in good working order.

- b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
 - c) Every crane driver or hoisting appliance operator, shall be 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 operator.
 - d) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine have a variable safe working load each safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded, beyond the safe working load except for the purpose of testing.
 - e) In case of a HEALTH SOCIETY, BIHAR's machine, safe working load shall be notified by the Engineer-in-Charge. As regards contractor's machine the Contractor shall notify the safe working load of each machine to the Engineer-in-Charge whenever he brings it to site of work and get it verified by the Engineer-in-Charge.
- 11.** Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards; hoisting appliances shall be provided with such means as will reduce to the minimum risk of accidental descent of load. Adequate precautions shall be taken to reduce to the minimum risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installation which are already energised, insulating mats, working apparel, such as gloves, sleeves and boots as may be necessary shall be provided. Workers shall not wear any rings, watches and carry keys or other materials which are good conductors of electricity.
- 12.** All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.
- 13.** These safety provisions shall be brought to the notice of all concerned by display on a notice board at a prominent place at works spot. Persons responsible for ensuring compliance with the Model Safety Code shall be named therein by the contractor.

- 14.** To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the Contractor shall be open to inspection by the Engineer-in-Charge or his representatives and the Inspecting Officers as defined in the Contractor's Labour Regulation.
- 15.** Notwithstanding the above conditions 1 to 14 the Contractor is not exempted from the operation of any other Act or Rule in force.

SECTION 5

SPECIFICATIONS

SECTION 5

SPECIFICATIONS

GENERAL WORKS SPECIFICATIONS

5.1 ADDITIONAL CONDITIONS FOR CEMENT

1. The Contractor shall procure 43 grade (conforming to IS: 8112) Ordinary Portland Cement, as required in the work, from reputed manufactures of cement, having a production-capacity of the one million tones per annum or more, such as J.K, Binani, L&T, JP Rewa, Vikram, Shri Cement, Birla Jute & Cement Corporation of India etc. as approved by Ministry of Industry, Government of India and holding license to use ISI certification mark for their product whose name shall be got approved from Engineer-in-Charge. Supply of cement shall be taken in 50 Kg. Bags bearing manufacturer's name and ISI marking. Samples of cement arranged by the contractor shall be taken by the Engineer-in-Charge and got tested in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by contractor does not conform to the relevant BIS codes, the same shall stand rejected & shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer-in-Charge to do so.
2. The cement shall be brought at site in bulk supply of approximately 10 tonnes or as decided by the Engineer-in-Charge.
3. The cement godown of the sufficient capacity of cement shall be constructed by the contractor at site of work for which no extra payment shall be made. Double lock provision shall be made to the door of the cement godown. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate inspection of the cement godown by the Engineer-in-Charge at any time.
4. The contractor shall supply free of charge the cement required for testing. The cost of tests shall be borne by the contractor.
5. The day-to-day actual issue /receipt and consumption of cement on work shall be regulated and proper accounts maintained. The theoretical consumption of cement shall be worked out on coefficient on cement consumption as per Delhi Schedule of Rates 2007 or mix design. The coefficient of cement consumption as certified by Engineer-in-charge of the work shall be final and binding for the items which are not covered on coefficient on cement consumption in BSR-2009

6. In the event of it being discovered after the completion of work that the quantity of cement used is less than the theoretical quantity ascertained after allowing variation of 2% on the minus side, the cost of quantity of cement less used shall be recovered from the contractor, **at rate of Rs. 500.00 per Bags** without prejudice to action for acceptance of work/item at reduced rate or rejection as the case may be decision of the engineer-in-charge in regard to theoretical quantity of cement which should have been actually used as per the schedule shall be final and binding on the contractor.

5.2 ADDITIONAL CONDITIONS FOR STEEL

1. The Contractor shall procure steel reinforcement bars conforming to relevant BIS Codes from main producers as approved by the Ministry of Steel. The Contractor shall have to obtain and furnish test certificates to the Engineer-in-Charge in respect of all supplies of steel brought by him to the site of work. Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS Codes. In case test results indicate that the steel arranged by the contractor, does not conform to the relevant BIS Codes, the same shall stand rejected and shall be removed from the site of work by the contractor at his own cost within a week's time of written order from the Engineer-in-Charge to do so.
2. The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion and nothing extra shall be paid on this account. Bars of different sizes and length shall be stored separately to facilitate easy counting and checking.
3. For checking nominal mass, tensile strength, bend test, re-bend test, etc. specimen of sufficient length shall be cut from each size of the bar at random at frequency not less than that specified below :

Size of bar	For Consignment below 100 tonnes
Under 10mm dia.	One sample for each 25 tonnes or part thereof.
10mm to 16mm dia.	One sample for each 35 tonnes or part thereof.
Over 16mm dia.	One sample for each 45 tonnes or part thereof.

4. The contractor shall supply free of charge the steel required for testing. The cost of tests shall be borne by the contractor.

5.3 ADDITIONAL CONDITION: FOR DISPOSAL OF SURPLUS EARTH

Surplus excavated earth which is beyond the requirement of TCIL shall with the written permission of the Engineer-in-Charge, be disposed off by the contractor on his own or he may sell the same to other parties under his discretion. However, no extra payment will be made by TCIL for disposing of such surplus earth, unless there is an item in the schedule for quantities.

5.4 SPECIAL CONDITIONS OF CONTRACT

1. The contractor shall submit within 10 days of the date of award of the work, a bar chart to the Engineer-in-Charge indicating the duration of various subheads of the work which shall be within the frame work of overall proportionate progress if so required. The work shall be executed as per the programme approved by the Engineer-in-Charge.
2. Unless otherwise specified in the schedule of quantities, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depth of the building & nothing extra shall be payable to him on this account.
3. No compensation whatsoever shall be payable to the contractor for any damage by rains, lightening, wind, storm, floods, tornadoes, earthquakes or any other natural calamities during execution of work. He will make good all such damages at his own cost and no claim on this account will be entertained.
4. The contractor shall execute the work in coordination with other agencies who will also simultaneously execute the components of the work allotted to them such as electrifications, horticulture, external services, and other bldg. works. The contractor shall leave such necessary holes, openings etc. for laying/burying in the work pipes, cables, conduits, clamps, boxes, and hooks for fan clamps etc. as may be required for the electric and sanitary works etc. and nothing extra shall be paid for the same.
5. Before commencement of the work, the contractor shall obtain approval of the Engineer-in-Charge regarding the location of cement go-down, steel stacking and fabrication yard, site office and shall from time to time take instructions from the Engineer-in-Charge regarding collection & stacking of materials at the site. No excavated earth or building materials shall be stacked on areas where other buildings, roads, services, or compound wall or any other structure are to be constructed.

6. Some restrictions may be imposed by the Department or its security staff / or by local authorities etc. on the working and/or movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on this account.
7. The Contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards such as day and night boards, speed limit boards, red flags, red lights and providing barriers. He shall be responsible for all damages & accidents caused due to negligence on his part. No hindrance shall be caused to traffic during the execution of the work.
8. The contractor shall give performance test of the entire work as per standard specifications before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the tests.
9. All operations required for continuing concreting work at the Construction joints for better bond are deemed to be included in the rates of the relevant items and nothing extra shall be payable on this account.
10. Royalty at the prevalent rates whenever payable, shall have to be borne by the contractor on the boulders, metal, shingle, sand & bajri etc. or any other materials collected by him for the work direct to the revenue authority of the District/State Government concerned & nothing extra shall be payable on this account.
11. The rates of all items of work, shall, unless clearly specified otherwise include cost of all labour, materials and all other inputs required in the execution of the item, including octroi, VAT, sales tax, cess and any other taxes.
12. In case of items for which abbreviated nomenclature is not available & also in case of Extra & substituted items of work for which abbreviated nomenclature is not provided in the agreement the full nomenclature of item shall be reproduced in the measurement books & bill forms for running account bills.
13. The Contractor shall maintain in perfect condition all works executed till the completion of the entire work allotted to him. Where phased handing over of completed portion of the work is required by the Engineer-in-Charge, the provisions mentioned in the above para will apply to each phase.
14. The contractor is permitted to erect the huts for labour etc. at the site of work, in such a manner that it shall not affect the

construction activities. Decision of the Engineer-in-Charge shall be final for the place & locations for the same.

15. In case the contractor is not permitted to erect the huts for labour at the site of work, the contractor will have to make his own arrangement to provide such accommodation elsewhere & nothing extra shall be paid for this.
16. The contractor must see the site of the work, its approaches carefully before tendering, No claim of any sort shall be entertained on account of any site conditions. If any approach from main road is required or existing approach is to be improved or maintained, for cartage & materials by the contractor, the same shall be provided, improved & maintained by him at his own cost.
17. The rates for all items of work wherein cement is used is inclusive of charges for curing.
18. The Architectural & Structural drawings, shall at all times be properly correlated before execution of any work.
19.
 - a) The building work will be carried out in the manner complying in all respects with the requirements of relevant byelaws and regulations of the local bodies, under the jurisdiction of which the work is to be executed and nothing extra will be paid on this account.
 - b) The work of electrical internal & external water supply, sanitary installations and drainage etc. shall be carried out as per the local body Bye-laws. The contractor shall engage licensed plumbers for the work & get approved all the concerned drawings from the local bodies (if required). He shall also get the materials (fixtures/fittings) tested by the Municipal body/Corporation authorities, wherever required at his own cost.
20. Any damage done by the contractor to any existing work during the course of execution of the work awarded to him shall be made good by him at his own cost.
21. The appropriate floor level for a particular item shall be with respect to the technical portion of the building.
22. In respect of projected balconies, projected slabs at roof level and projected verandah, the payment for the RCC work shall be made under the item of RCC slabs. Nothing extra shall be paid for the side shuttering at the edges of these projected balconies and projected verandahs

23. The floor of Factory shed shall be laid in such a way that limits in floor levels would not be exceeded as follows: -
- a) The level checked over a distance of 4 meters in any direction shall not exceed 5 mm.
 - b) The maximum permissible variation in the levels at any two points more than 4 meters away in any direction in the same room shall be 8 mm.
- 24 The variation in consumption of materials shall be governed as per CPWD specifications & clauses of the contract to the extent applicable.
- 25 Contractor should deploy complete one set of shuttering materials for minimum one complete floor and the shuttering materials for beam bottom shall be minimum for Two complete floors.
- 26 Precast factory made round type cover blocks shall be used during concreting.
- 27 In case of dewatering, agencies are required to obtain permission from local authorities for disposal of subsoil water on their own and for this no extra payment shall be admissible.

5.5 CONDITIONS FOR STORAGE OF MATERIALS:

1. Cement bags shall be stored in separate godown to be constructed by Contractor at his own cost as per sketch in figure 1 of chapter-3 (clause 3.1.2.4) of C.P.W.D Specifications 1996 Vol. II with weather proof roofs and walls (Refer Annexure-VIII). Each godown shall be provided with a single door with two locks. The keys of one lock shall remain with the authorized representative of Engineer-in-Charge & that of the other lock with the authorized agent of the contractor at the site of work so that the cement is removed from the godown according to the daily requirement with the knowledge of both the parties.
2. The contractor shall be fully responsible for the safe custody of the materials brought by him even if the materials are under double lock system.
3. The reinforcing steel brought to site of work shall be applied with a coat of cement slurry and stored on brick/ timber platform of 30/40 cm height. The cost of application of cement slurry and storing it on platform shall be included in the steel reinforcement item and nothing extra shall be paid on this account

4. The contractor shall construct suitable godown /yards at the location of the site of work duly approved by the Engineer-in-Charge or his authorized representative for storing all other materials so as to be safe against damage by sun, rain, dampness, fire, theft etc. at his own cost and also employ necessary watch and ward establishment at his cost.
5. All materials obtained shall be got checked by the Engineer-in-Charge of the work or his authorized representatives on receipt of the same before its use in the work.
6. The contractor shall maintain & render proper account of all materials brought by him to the site, consumed by him on the work & balance if any.
7. TMT Steel bars (Thermo Mechanically Treated (TMT) steel bars conforming to IS 1786) shall be brought in length, shape and sizes as available in the market. No claim on this account shall be entertained. Nothing extra will be paid for "straightening of bars" received from market in coils or with bends. All incidental charges of any kind whatsoever including cartage, storage, safe custody of materials, cutting & wastage etc. shall not be paid to him on this account.

5.6 CONDITIONS FOR MEASUREMENT OF STEEL:

Measurement of steel reinforcement shall be as per procedure described below.

1. Steel reinforcement (Thermo Mechanically Treated (TMT) steel bars conforming to IS 1786) including spacer bars and laps shall be measured in length of different diameters nearest to a centimeter.
2. The standard sectional weights of Thermo Mechanically Treated (TMT) steel bars to be considered for conversion of length of different diameter bars into weights are as per the Table 4 (clause 5.3.3) CPWD Specifications 1996 vol. II which is reproduced below.

Size (Diameter) mm	Weight Kg/M	Size (Diameter) mm	Weight Kg/M
6	0.222	25	3.850
8	0.395	28	4.830
10	0.617	32	6.310
12	0.888	36	7.990
16	1.580	40	9.850
18	2.000	45	12.500
20	2.470	50	15.420
22	2.980		

3. Records of actual sectional weights shall also be kept diameter wise and lot wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer-in-charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as Derived Actual weight.
4. (a) Measurement of all diameters of steel shall be taken on linear basis and will be converted into weight on the basis of standard sectional weight coefficients mentioned in para 2 above or Derived Actual Weight as described in para 3 above.
 - (b) If the Derived weight as in para 3 above is lesser than the Standard weight as in para 2 above than the Derived Actual weight shall be taken for payment.
 - (c) If the Derived weight as in para 3 above is found more than the Standard weight then the Standard weight as mentioned in para 2 above shall be taken for payment. In such case nothing extra shall be paid for the difference between the Derived Actual Weight and Standard Weight.

5.7 TESTING OF MATERIALS:

- I) Samples of various materials required for testing shall be provided free of charges by the contractor. Testing charges, if any, shall be borne by the HEALTH SOCIETY, BIHAR. All other expenditure required to be incurred like conveyance for taking the samples for testing at the laboratory, packing etc. shall be borne by the contractor himself. If the test results do not conform to the specifications & standards laid down and the materials are rejected on this account the testing charges shall be recovered from the contractor. The place of testing of samples shall be decided by the Engineer-in-Charge, whose decision shall be final & binding.
- II) The contractor shall be responsible to arrange at his own cost all necessary tools and plants required for execution of the work. The contractor shall provide at his own cost suitable weighing and measuring arrangement at site for checking the weight/dimensions as may be necessary for execution of work.
- III) With a view to avoid controversy about quality of cement concrete as revealed in the test results of 7days cubes falling short of the prescribed standard by over 10% to 20% and pending testing of

balance 3 cubes for 28 days as final confirmatory acceptance test, crushed samples of cement concrete from the failed 7 days cubes shall be preserved in a sealed bag.

- IV) Material brought at site of work shall not be used in the work before getting satisfactory test result. Some of the Important Mandatory tests are enumerated in the Annexure I. For details, relevant provision in the C.P.W.D. Specification 1996 for works shall be referred.
- V) The water will be tested with regard to its suitability for use in work.

5.8. CONDITION REGARDING PAYMENT OF WATER CHARGES IN CONNECTION WITH WATER USED FOR CONSTRUCTION PURPOSE & FOR DRINKING PURPOSE OF CONTRACTOR'S LABOURS RESIDING ON SITE OF WORK.

The contractor shall make his own arrangement for water. All water charges levied by the local bodies/concerned authorities for the construction shall be borne by the contractor and the Department shall not bear any liability on this account.

Both the water charges (if any) incident to water used by the contractor for construction purpose and for the drinking purpose for his labours residing on site of work shall be borne by the contractor/agency under the following cases: -

- a) In case of temporary water connections from municipal mains:-
Water charges (including the water used for construction purpose and drinking purpose of the contractor's labours) have to be borne by the contractor/agency.
- b) Water used from other sources: -
Prior permission for using the water for construction purpose and drinking purpose of the contractor's labours has to be obtained from municipal corporation/local body by the contractor/agency. Water charges if any and other charges for use of water from other sources for construction purposes and for drinking purposes of the contractor's labours have to be borne by the contractor/agency.

Any infringement and/or breach of the above specifications & conditions etc. shall render the contractor liable to action under various clauses of the contract and such actions stipulated in the condition therein.

5.9 The contractor shall clear the existing jungle from entire site including uprooting of rank vegetation, grass and remove the same to approved pit of local municipality and nothing extra what so ever shall be paid by the HEALTH SOCIETY, BIHAR.

5.10 SPECIAL CONDITIONS FOR ELECTRICAL WORKS

- 1.1 The work shall be carried out strictly in accordance with CPWD specifications of electrical work (Internal & External) as amended up to date.
- 1.2 In the absence of above specifications for any class of work the latest IS codes (i.e. all amendments issued up to the date of receipt of tenders) shall be followed.
- 1.3 For items not covered under 1.1 & 1.2 above, the decision of the Engineer-in-Charge shall be treated as final.
- 1.4 Wiring for group control light points shall be measured in circuit wiring.
- 1.5 The make / brand of the material to be used shall be as per the list of approved makes of materials attached.
- 1.6 When it is not possible to use any of the approved makes, either due to non-availability or due to technical reasons, alternate make shall be approved by the Engineer-in-Charge.
- 1.7 The sample of all the materials to be used should be got approved from the Engineer-in-Charge before the whole lot is brought at site.
- 1.8 Conductors can be looped from the light, fan switch or socket outlet on the same circuit, not more than 8 points shall be connected to one circuit.
- 1.9 Metallic parts must be properly connected to earth. The payment for this shall be included in the point rate as per DSR, CPWD.
- 1.10 The work shall be carried out according to the approved drawings by the Engineer-in-Charge, However, the Engineer-in-Charge reserve the right to change the layout as per requirements. The route of wiring shall be carried out as per the instructions of the Engineer-in-Charge.
- 1.11 Any damages done to the building, during the execution of electrical works shall be the responsibility of the electrical contractor and the same will be made good immediately at his own cost to the satisfaction of the Engineer-in-Charge. Any expenditure incurred by the Department in this connection shall be recovered from the contractor and the decision of the Engineer-in-Charge shall be final.
- 1.12 Bad workmanship will not be accepted and the defects shall be rectified at contractor's cost to the satisfaction of the Engineer-in-Charge. The programme of electrical works are to be coordinated in accordance with

the building work and no claim for idle labour will be entertained by the Department.

- 1.13 All the debris of the electric works should be removed and the site should be cleared by the contractor immediately after the occurring of debris. Similarly any rejected materials should be removed immediately from the site by the contractor.
- 1.14 The contractor or his representative is bound to sign the site order book as and when required by the Engineer-in-Charge and to comply with remarks therein.
- 1.15 The contractor shall have to return the surplus material supplied by the Department (if any) for use on the work failing which the recovery shall be made at the panel recovery rate as ascertained by the Engineer-in-Charge which shall be final and binding.
- 1.16 The watch and ward of the material issued to the contractor or installed at site shall be the responsibility of the contractor till the installation on completion is finally handed over to the owner.
- 1.17 Completion certificate as per Appendix E of General Specifications 1972 Part-I I. Internal shall be supplied by the contractor failing which Rs. 5,000.00 (Rs. Five Thousand only) shall be deducted from his bill.
- 1.18 All connections and interconnections at the main switches and also at the SDB's switches shall be carried out with crimped lugs. Nothing extra shall be paid for this.
- 1.19 Route of conduit and wiring shall be got approved from the Engineer-in-Charge before taking up the execution.
- 1.20 All junction boxes for fire alarm system shall be painted red.
- 1.21 The contractor will supply completion drawings of the entire installation on tracing paper as well as three prints of each drawing showing the complete wiring diagrams with sizes as executed at site drawn to scale to be approved by the Department after completion of work but before the completion certificate is issued by the Department.
- 1.22 The work shall be supervised by a qualified supervisor.
- 1.23 The following wiring shall be done on separate circuits:
 - a. Power plug wiring.
 - b. Light & Fan point wiring.
 - c. Telephone wiring.

- d. Emergency light point wiring.
- 1.24 The number of power plug points and emergency light points to be fed from the battery may not exceed two per circuit in any of the cases.
 - 1.25 The outlet boxes, I.C. boxes for switches and pieces of conduit etc., for different categories of conduit runs catering for different types of electric wiring, shall be painted inside with different colours each signifying the different categories mentioned to avoid mixing of various circuits and their wiring and nothing extra shall be paid on this account.
 - 1.26 At the time of laying conduit pipe in the slab, the contractor will keep fish wire of 14 SWG wire throughout the conduits. The conduit pipes should be mechanically and electrically continuous.
 - 1.27 All the I.C. distribution boards, submain boards and main boards, their complete fittings shall be written clearly indicating the number of distribution board, the types of load it is serving and the number of circuits contained in the distribution board, and the details of the routes in a tabular form at the reverse of the cover of the distribution board.
 - 1.28 The contractor will have to use metal clad switches and metal clad distribution boards of specified categories as given in the schedule of work.

2.0 Testing of Installation:

General:

Inspection and testing of the installation shall be carried out as per section 10 part –1 of the National Electrical Code-1985 such as:

- a) Insulation resistance and wiring continuity test.
- b) Earth resistivity and continuity test.
- c) Test of polarity of non-linked single pole switches.\

Nothing extra shall be paid to the contractor on this account. Test Reports should be submitted alongwith completion plan at the time of final bill.

2.1 Insulation Resistance Test:

The insulation shall be measured between the earth and whole system of conductors or any section thereof with all fuses in place and all switches closed except in concentric wiring, all lamps in position or both poles of the installation otherwise electrically connected together, at a direct current pressure of not less than twice the working pressure provided that it does not exceed 660 volts for medium voltage circuits.

Where the supply is derived from the three wire or from a poly-phase system, the neutral pole of which is connected to earth, either direct or through added resistance, the working pressure shall be deemed to be that which is mentioned between the phase conductor and the neutral.

The insulation resistance measured as above shall not be less than 50 mega ohm divided by the number of points on the circuit provided that the whole installation shall not be required to have an insulation resistance greater than one megohm.

The insulation resistance shall also be measured between all the conductors connected to one pole or phase conductor of the supply and all the conductors connected to the middle wire or the neutral or to the other pole or phase conductor of the supply and its value shall be not less than that specified in above clause.

2.2 Testing of Earth Continuity

The earth continuity conductor i.e. metal conduit and metallic envelope of cables in all cases shall be tested for electric continuity and the electrical resistance of the same along with the earth lead but excluding any added resistance or earth circuit leakage breaker measured from the connection with the earth electrode to any point in the earth continuity conductors in the completed installation shall not exceed 1 ohm.

2.3 Testing of polarity of non-linked single pole switches:

In a two wire installation, tests shall be made to verify that all the linked single pole switches have been fitted in the same conductor throughout and such conductors shall be labeled or marked for connection to outer or phase conductor or the non earthed conductor of the supply.

In a three wire or a 4-wire installation, a test shall be made to certify that every single pole switch is fitted in a conductor, which is labeled or marked for two connections to one of the outer or phase conductor of the supply.

Cable connections between floors, fire barriers shall be provided at every floor:

5.11 PARTICULAR SPECIFICATIONS

I. INTEGRAL CEMENT BASED WATER PROOFING TREATMENT

(A) TREATMENT FOR SURFACE OF THE TERRACE FLOOR:

- a) The brickbats used in the work shall be of well-burnt bricks. The proprietary waterproofing compound shall conform to I.S. 2645-1975. In case it is so directed by the Engineer-in-Charge stone aggregate shall be used in lieu of brick aggregate without any extra cost to the HEALTH SOCIETY, BIHAR.
- b) The finished surface of the water proofing treatment shall have a minimum slope of 1 in 80. However, in general the minimum thickness of the treatment shall be not less than 65mm.
- c) Before treatment of the roof surface is done, it shall be ensured that the outflow pipes have been fixed and mouth at the entrance has been eased and rounded off properly for easy flow of water.
- d) The surface where the waterproofing is to be done shall be thoroughly cleaned with wire brushes. All loose scales shall be removed & dusted off & applied with a coat of neat cement slurry admixed with proprietary water proofing compound to penetrate into crevices and fill up all the porosities in the surface.
- e) After the slurry coat is laid, layer of well burnt brick bats shall be laid in cement mortar 1:5 (1 cement: 5 coarse sand) or in mix as specified by the specialist firm admixed with proprietary water proofing compound to required gradient and joints filled to half the depth. The brickbat layer shall be rounded at the junction with parapet etc. and tapered towards top for a height of 300mm. Curing of this layer shall be done for 3 days.

- f) After curing, the surface shall be applied with cement slurry admixed with proprietary water proofing compound.
- g) Joints of brickbat layer shall be filled fully with cement mortar 1:4 (1 cement : 4 coarse sand) or in mix as specified by the specialist firm admixed with proprietary water proofing compound & finally top finished with average 20mm thick layer of same mortar including finishing the surface smooth with cement slurry admixed with proprietary water proofing compound. The finished surface shall have markings of 300mm x 300mm false squares to give the appearance of tiles.
- h) The whole terrace so finished with water proofing treatment shall be flooded with water for a minimum period of two weeks for curing and final test.
- i) MEASUREMENTS: Clear measurements from wall to wall only shall be measured for payment. No deduction in measurements shall be made for either openings or recess for chimney stacks, roof lights and the like for areas upto 0.40 Sqm. nor anything shall be paid for forming such openings. For similar areas exceeding 0.40 Sqm. deductions will be made in measurements for full opening and nothing extra shall be paid for making such openings.
- j) RATE: The rate shall include the cost of all labour & materials involved in all the operations described above.
- k) GUARANTEE: The above water proofing treatment shall be guaranteed for FIVE YEARS from the date of completion against any leakage etc. in the prescribed proforma for Guarantee Bond.

(B) GUARANTEE BOND

Five Years Guarantee bond in prescribed proforma attached with the tender shall be submitted by the contractor which shall also be signed by both the specialized agency and the contractor to meet their liability/liabilities under guarantee bond. However, the sole responsibility about efficiency of water proofing treatment shall rest with the building contractor.

If any defect is noticed during the guarantee period, the contractor shall rectify it within seven days of receipt of intimation of defects in the work. If the defects pointed out are not attended to within the specified period, the same shall be got done from other agency at the risk and cost of contractor.

II. ALUMINIUM WORK:

A. GENERAL

- i. The work shall be carried out through a specialized firm who has experience of doing similar works in government

departments/undertakings. Contractor shall furnish the name of manufacturer / supplier concerned from which he intends to procure the fabricated component or finished items of powder coated or electro colour anodized aluminium doors, windows, partitions, louvers and ventilators etc. along with his work experience. The specialized agency shall be got approved from Engineer-in-charge before execution.

- ii. Before commencement of the work, the contractor shall co-relate all relevant structural, architectural, detailed drawings of Aluminium doors, windows etc. and shall satisfy himself that the information available, there from is complete and unambiguous. The contractor shall be responsible for any error / omission owing to any discrepancy in the drawings, which has been over looked by him and / or had not been brought to the notice of the Engineer-in-Charge before execution.

The Contractor shall submit the shop drawings of doors, windows, louvers, and cladding and other aluminium work, to the Engineer-in-Charge for his approval. The shop drawing shall show full size and sections of doors, windows etc., thickness of metal (i.e. wall thickness), details of constructions, sub-frame/rough ground profile, anchoring details, hardware as well as connection of windows, doors and other metal work to adjacent work. Samples of all joints and methods of fastening and jointing shall be submitted to the Engineer-in-Charge for approval well in advance of commencing the work.

- iii. Samples of un-anodized as well as anodized and Electro coloured or powder coated aluminium sections, neoprene gaskets, thermal barrier sections, glass, screws, hardware and any other material or components requiring approval of samples in opinion of Engineer-in-Charge shall be submitted for approval as above. All samples shall be provided at the cost of the contractor. The Contractor shall be required as directed by the Engineer-in-Charge, to get necessary tests carried out on materials components from the laboratories / test houses, approved by the Engineer-in-Charge. The contractor shall, if required by the Engineer-in-Charge produce manufacturer's test certificates for any material or particular batch of materials supplied by him. The tests carried out shall be as per relevant specifications / Indian Standard Code.
- iv. All materials brought to the site by the contractor for use in the works, as well as fabricated components shall be subject to inspection and approval by Engineer-in-charge. In case any materials/components are rejected by the Engineer-in-charge, the same shall be removed from the site, failing which the same may be got removed by the Engineer-in-charge at the risk and cost of the contractor.
- v. Aluminium sections to be used for doors and windows shall be extruded sections of profile as detailed on drawings. The sections shall be extruded by the reputed manufacturers approved by the Engineer-in-Charge. The aluminium extruded sections shall conform to BIS Designations HE / HV 9-WP alloy, with chemical composition and mechanical properties,

strength and durability as per IS: 733 & IS: 1285. The aluminium section shall also satisfy about their being appropriate on technical, structural, functional and aesthetic considerations. The permissible dimensional tolerance of the extruded sections shall be such as not to impair the proper and smooth function / operation and appearance of doors and windows.

- vi. Door, windows etc. shall be fabricated to sizes in factory and shall be of section sizes, combinations and details as per architectural drawings. All doors, windows etc. shall have mechanical joints. All members shall be accurately machined and fitted to form hairline joints prior to assembly. The joints accessories such as cleats, brackets etc. shall be of such material as not to cause any bimetallic action. The design of the joints and accessories shall be such that the accessories are fully concealed. Nothing extra shall be paid for jointing accessories.
- vii. The fabrication of door, windows etc. shall be done in suitable sections to facilitate easy transportation, handling and installation. Adequate provision shall be made in the door and window members for anchoring for support and fixing of hardware and other fixtures as approved by the architect.
- viii. All hardware shall conform to their relevant specifications and as per samples approved by the Engineer-in-charge, design, quality, type, number and fixing shall be generally in accordance with architectural drawings and as approved by the Engineer in charge.
- ix. All doors, windows, ventilators and glazing etc. shall be made completely leak proof against water and air with neoprene gaskets and silicon sealants to the satisfaction of the Engineer-in-Charge, for which no extra payment shall be made. The gap between frames and supports and also any gap in the various sections shall be filled with approved silicon sealant to ensure complete water tightness. The sealant shall be of such approved colour and composition that it would not stain the masonry / RCC work. It should not set on floor and shall not set hard or dry out under any condition(s) of weather. The silicon sealant shall be used as required and shall match the colour of the aluminium sections. Any excess sealant shall be removed / cleared.
- x. Mitered joints of the doors, windows, ventilators, shutters and frames shall be either corner crimped or fixed with self tapping stainless steel screws of approved make and quality to heavy duty extruded aluminium cleats and sealed with silicon sealant for which nothing extra shall be paid.
- xi. Fixing of glass panes should be designed in such a way that replacing damaged / broken glass panes is easily possible without having to remove or damage any members or interior finishing materials.

- xii. Verticals of the frame shall be embedded in the floors, wherever required, by 50mm by cutting and making good of the floor. Nothing extra shall be paid for the same.
- xiii. The screws used for fixing aluminium frames to masonry walls/RCC members and aluminium member to another aluminium members shall be of stainless steel of approved make and quality. Threads of machine screws used shall conform to requirement of IS: 4218.

B. ANODISING / ELECTRO COLOURING:

- i. Aluminium sections shall be anodized as per IS: 7088-1973. Anodizing to be as per grade AC 15 and not less than 15 microns thick when measured as per IS 6012, and Electro colour with colour fastness rating no. 8 of IS 1868-1982. Colour anodizing would be done only by electro colour process. No visual variation in colour shall be permitted. The tenderer shall clearly indicate the shade variation tolerance as measured by standard equipments. The contractor shall furnish manufacturer's certificate as regards anodic and powder coating thickness with batch number.
- ii. The anodic coating shall be properly sealed by steam or by boiling in de-ionized water as per IS: 1868 and or IS 6057. Sealed quality shall be tested in accordance with the relevant standards. Nothing extra shall be paid for above.
- iii. The Contractor shall satisfy himself by 100% checking in the factory that the thickness of the anodic coating is found to be minimum 15 microns and sealing quality appropriate everywhere. The testing shall be done by EDDY CURRENT METHOD as per IS 6012 for thickness. If any material is found substandard, this shall be totally rejected. Requisite tests shall also be required to be carried out at the site as instructed by the Engineer-in-Charge and the contractor shall arrange all the equipments required for these tests at site. Nothing extra shall be paid for above. The anodizing shall be got done through standard firm to be approved by the Engineer-in-Charge.
- iv. All anodized aluminium works shall conform to relevant IS Standards relating to materials, workmanship, fabrications, finishing, erection, installation etc. In this connection, IS codes including 1868-1982, IS 733-1983, IS 1948-1961, IS 7088-1973, 6012-1970, IS 1285-1975, IS 740-1975 are considered relevant and applicable.
- v. A thick layer of clear transparent lacquer based on methacrylates or cellulose saturate shall be applied on the anodized sections, before they are brought at site. The lacquer shall be removed after installations complete or as an alternative, the exposed surface of the aluminium sections shall be provided with gummed paper tape protective. After fixing

and assuring of proper functioning of doors, windows etc. such protective layer shall be cleaned out / removed. Nothing extra shall be paid for above.

C. HANDLING AND STACKING

Fabricated material shall be protected against any damage during transportation. Loading and unloading shall be carried out with utmost care. On receipt of materials at site, they shall be carefully examined to detect any damaged pieces. Arrangements shall be made for expeditious replacement of damaged pieces, parts. Materials found to be acceptable on inspection shall be repacked in crates and stored safely.

In the case of composite windows and doors, different units are to be assembled first. The assembled composite units should be checked for line, level and plumb before final fixing is done. Units may be assembled at their final location as situation warrants.

The contractor shall be responsible for assembling composite units, bedding and filling the groove with polysulphide sealant inside and outside, at transoms and mullions, placing the doors, windows etc. in their respective opening. After the door/windows have been fixed in their correct assigned position, the open hollow sections abutting masonry concrete shall be filled up with approved polysulphide densely packed and finished neat.

The contractor shall be responsible for doors, windows etc. being set straight, plumb, level and for their satisfactory operation after fixing is complete.

D INSTALLATION

Just prior to installation, the doors, windows etc. shall be uncrated and stacked on edge on level bearers and supported evenly. The frame shall be fixed into position with Aluminium tube, backing true to line and level using adequate number of expansion machine bolts, anchor fasteners of approved size and manufacture and in an approved manner. The holes in concrete/masonry members for housing anchor bolts shall be drilled with an electric drilling machine.

The door/windows assembled as shown on drawings shall be placed in correct final position in the opening and marks made on concrete members at jambs, sills and heads against the holes/provided in frames for anchoring. The frame shall then be removed from the opening and laid aside. Neat holes with parallel sides of appropriate size shall then be drilled in the concrete members with an electric drilling machine at the marking to house the expansion bolts. The expansion bolt shall then be

inserted in the holes, struck with a light hammer till the nut is forced into the anchor shell. The frame shall then be placed in final position in the opening and anchored to the support through, cadmium plated machine screws of required size threaded to expansion bolts. The frame shall be set in the opening by using wooden wedges at supports and be plumbed in position. The wedges shall invariably be placed at the meeting points of glazing bars and frame.

Fittings

Hinges, stays, handles, tower bolts, locks and other fittings shall be of good quality and manufacture and shall be got approved from Engineer-in-Charge before use.

E GLAZING

- i. All glass panes shall be retained within aluminium framing by use of exterior grade neoprene gaskets. No water leakage shall occur on the interior even if water penetrates exterior neoprene gaskets. Use of glazing or caulking compounds around the perimeter of glass will not be permitted. All fixed glass panes shall be supported by setting blocks. There shall be no whistling or rattling. Before installations of glass, contractor shall ensure the following.
- ii. All glazing rebates shall be square, to plumb, true to plane, dry and free from dust.
- iii. Glass edge shall be clean and cut to exact size.
- iv. Glazing shall provide such thermal expansion and contraction of components, as will be caused by the temperature variations inside and outside without causing buckling stress on glass, detrimental effect on structural elements and components.
- v. Samples of typical glazing shall be made and got approved by the Engineer-in-Charge before mass installation taken in hand.
- vi. Sheet glass in doors, windows, ventilators and fixed glazing etc. shall be of approved make and standard quality.
- vii. 4mm (10.00 Kg. / Sq.m.) thick glass panes shall be provided for openings not exceeding 0.5sq.m. Openings exceeding 0.5 sq.m. in size should be provided with 5.5mm thick (13.75 Kg. / Sq.m.) glass panes unless specified otherwise.

Protection and cleaning

After erection and removal of protective layer, all aluminium works including glass panes shall be washed with a suitable thinner and water to give a uniform clear appearance free from all marks and blemishes.

F MEASUREMENT AND RATES:

- i. For aluminium framework the length of each member of the frame shall be measured correct to half centimeter. The weight shall then be calculated on the basis of unit weight specified in the manufacture's catalogue.
- ii. The weight shall also be calculated on the basis of unit weights specified in respective drawings attached to the tender documents.
- iii. For purpose of payment, the least of the above two weights calculated shall be considered subject to the condition that actual weight per meter of the respective sections is not less than the weights calculated above. In case the actual weight per meter is less as stated, the payment shall be made as per actual weight in accordance with the procedure prescribed by Engineer-in-Charge.
- iv. For fixed glazing and fixed laminated inserts, length and breadth of the opening where glass etc. are to be sealed shall be measured correct to half a centimeter and area to be calculated in square metre correct to two places of decimal.
- v. For shutters of doors, windows & ventilators, payment by weight shall be made for aluminium sections including beading. All jointing accessories like cleat/angles, fittings such as handles, hinges etc, shall not be included in the aluminium weight to be paid.
- vi. Fittings such as adjustable friction hinges, butt hinges/pivots, tower bolts, handles, sliding bolts, locks and any other fittings shall be paid separately. However nothing extra shall be paid for jointing accessories like cleats/angles, screws, nuts, bolts etc. , silicon sealant and neoprene gaskets.
- vii. Prefabricated anodized aluminium decorative protective grill (excluding frame work) shall be measured correct to half a centimeter in both the directions and area worked out correct to two places of decimal. The weight of the grill shall be calculated on the basis of the above area multiplied by unit weight specified in manufacturer's catalogue. The aluminium framework provided to the above protective grill shall also be measured, correct upto half a centimeter and its weight calculated on the basis of unit weight specified in manufacturer's catalogue.

- viii. The weight of above grills shall also be calculated in the above manner in accordance with the unit weights mentioned in the Architectural drawings / item in schedule of quantity.
- ix. The actual weight of each grill shall also be taken at site excluding aluminium base framework.
- x. For the purpose of payment, the least of the weights mentioned above shall be considered. The payment for the base framework of aluminium grill shall be made under the item of aluminium windows/door.
- xi. For fabrication of aluminium work, measurement of actual openings at site shall be measured for fabrication and erection, as per this tender document.
- xii. It is made clear those items such as cleats / angles other fixtures, nuts, bolts, screws etc. which shall be required for fabrication and erection of aluminium work as per this tender document shall not be considered for the purpose of measurements and payments of various items. The rate of various items as per schedule of quantities is however inclusive of above elements and nothing extra shall be paid for the same.

ANNEXURE-I

LIST OF MANDATORY TESTS

1. **ROAD WORKS** :- As per MORTH Specifications (4th revision) and as per relevant IS/IRC Codes

2. **BUILDING WORKS**

Material	Test	Method	Minimum quantity of material/work for carrying out the Test	Frequency of Testing
Sand	a) Silt Content	Field	20 Cum	Every 20 Cum or part thereof or more frequently as decided by Engineer – in –charge -do- Every 40 Cum of sand required in RCC works only. Every 80 cum of sand for other works.
	b) Bulking of sand	Field	20 Cum	
	c) Particle size distribution	Field/Laboratory as decided by Engineer-in-charge	40 Cum	
Stone Aggregate	a) Percentage of soft or of deleterious materials	Field	45 Cum	As required by Engineer-in-charge For every 45 cum or part thereof for RCC work only. For rest of items as decided by Engineer-in-charge. Initial test and subsequent test as and where required by the Engineer-in-charge.
	b) Particle size distribution	Field/Laboratory		
	c) Ten percent fine value	Laboratory		
Cement concrete or reinforced cement concrete (not lesser than 1:3:6)	Slump	Field	-	15 cum or part thereof or more frequently as required by the Engineer-in-charge.

Flush door	1. End immersion test 2. Knife test 3. Adhesion	Laboratory	26 shutters	As per sampling and testing specified in clause 9.7.10 CPWD specifications 1996 with up to date corrections.
Terrazo tiles	1. Transverse strength	Laboratory	5000 tiles	One test for every 10000 nos or part thereof for each type and size from a single manufacturer etc. as per CPWD specifications 1996
	2. Water absorption	-do-	-do-	-do-
	3. Abrasion test	-do-	-do-	-do-
Lime	Chemical and physical properties	Laboratory	5 M.T.	10 MT or part thereof as decided by Engineer-in-charge
Brick tiles	Testing of Brick tiles for a) compressive strength, water absorption dimension	Laboratory	50,000	For every 50,000 or part thereof
	b) water efflorescence	Laboratory	50,000	One test per source of manufacture
Marble	a) Water absorption	Laboratory	50 square metres	50 sq.m part thereof if required by Engineer-in-charge
	b) Mohs scale hardness test	-do-	-do-	-do-
Aluminum door or window fittings	Thickness of anodic coating	Laboratory	If the cost of fittings exceeds Rs. 20000/-	Rs. 25,000/- or part thereof, if required by the Engineer-in-Charge
Mortice locks	Testing of spring	Laboratory	50 Nos	100 or part thereof
White glazed tiles	1. Water absorption 2. Crazeing test 3. Impact	Laboratory	3000 nos	3000 nos or part thereof

	strength test 4. Chemical resistant test			
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SECTION 6

PROFORMA

BANK GUARANTEE (PERFORMANCE)

The Chairman & Managing Director
Telecommunications Consultants India Ltd.,
TCIL Bhawan, G.K.-I,
New Delhi – 110048

Upon request from M/s _____ we hereby agree to issue this irrevocable of Guarantee to an aggregate amount of _____ only ten percent (10%) of the contract price relating to _____ as Guarantee Bond for your contract No. _____-and amendment(s) if any, under your invitation no. Nil dt. _____ we the _____ hereby agree and engage ourselves to pay immediately to you on demand and without any demur and recourse upon receipt of your writer claim upto claim upto _____ certifying that M/s _____ failed to fulfill the contractual of the said contract your decision as to whether the contractor has failed/neglected to perform or discharge the several duties and obligations on its part in respect of the said contract and as to the amount payable to you by us, shall be final and binding on subject to the maximum of Rs. _____ (Rupees _____ only)

We _____ hereby undertake not to revoke this guarantee during its currency and the guarantee contained herein shall not be

affected by any change in the constitution of the supplier/contractor or the purchaser/company or the bank. Not with standing anything contained herein (i) Our liability under this Bank Guarantee shall not exceed Rs. _____ (Rupees _____) (ii) This Bank Guarantee shall be valid up to _____ and (iii) We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before _____ (Date of expiry of guarantee). This Guarantee is valid only accompanied by our forwarding covering Letter bearing No. _____ date _____ signed by the Officials of the Branch.

Please note that this Bank Guarantee shall automatically stand cancelled not with standing the fact that the original Bank Guarantee document, may not be returned to us by you.

Format for Bank guarantee for Security of Mobilization Advance

BANK GUARANTEE FOR SECURITY OF MOBILIZATION ADVANCE

In consideration of "Telecommunications Consultants India Limited" (hereinafter referred as the "TCIL", which expression shall, unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded to M/s, having its office at (Hereinafter referred to as the "Agency" which expression shall repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns), a contract by ... issue of TCIL Contract Agreement no./ Letter of Acceptance No..... dated and the same having been unequivocally accepted by the Agency, resulting in a Contract valued at Rs..... (Rupees) excluding service tax for construction ofunder (Hereinafter called the "Contract"), and the Agency having agreed to furnish a Bank Guarantee to the TCIL as "Mobilization Advance" as stipulated by the Society in the said contract for performance of the above Contract amounting to Rs..... (Rupees). We,..... having registered office at _____, a body registered/constituted under the _____(hereinafter referred to as the Bank), which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Society immediately on demand any or, all money payable by the Agency to the extent of Rs..... (Rupees) as aforesaid at any time up to without any demur, reservation, contest, recourse or protest and/or without any reference to the Agency. Any such demand made by the TCIL on the bank shall be conclusive and binding notwithstanding any difference between the TCIL and the Agency or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. We agree that the Guarantee herein contained shall be

irrevocable and shall continue to be enforceable till the TCIL discharges this guarantee. The TCIL shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time to vary or to extend the time for performance of the contract by the Agency. The TCIL shall have the fullest liberty without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Agency and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the TCIL and the Agency any other course or remedy or security available to the TCIL. The bank shall not be relieved of its obligations under these presents by any exercise by the TCIL of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the TCIL or any other indulgence shown by the TCIL or by any other matter or thing whatsoever which under law would but for this provision have the effect of relieving the Bank. The Bank also agrees that the TCIL at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Agency and notwithstanding any security or other guarantee that the TCIL may have in relation to the Agency liabilities.

Notwithstanding anything contained herein,

a) Our liability under this Bank Guarantee is limited to Rs...../- (Rupees) and it shall remain in force up to and including and shall be extended from time to time for such period as may be desired by M/s, on whose behalf this guarantee has been given.

b) This Bank Guarantee shall be valid up to

SECTION 7

FORM OF AGREEMENT

SECTION - 7

PROFORMA FOR AGREEMENT

(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

AGREEMENT

THIS AGREEMENT made theDay of, 2010 between TELECOMMUNICATIONS CONSULTANTS INDIA LIMITED, TCIL BHAWAN, GREATER KAILASH-I NEW DELHI (hereinafter called the Employer) of the one part and M/s (hereinafter called "the Contractor") of the other part. Whereas the employer is desirous that certain works should be executed viz. _____ Tender No. _____ and has accepted a Tender of the Contractor for rendering of such services.

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement words and expressions have the same meanings as are respectively assigned to them in the conditions of the contract thereafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement viz.
 - Technical offer of the agency vide letter no.dated.....
 - Financial offer along with original tender documents issued by TCIL or downloaded by Agency from website of TCIL for submission of offer vide letter No. dated
 - Letter of Award No..... dated (as issued by the Employer).
 - Letter of Acceptance No. dated(as issued by the contractor)
3. In consideration of the payments to be made by the employer to the Contractor as hereinafter mentioned the Contractor hereby covenants with the employer to provide the services in all respects with the provisions of the contract.
4. The employer hereby covenants to pay the Contractor in consideration of services provided at the contract price (as mentioned in the award letter) at the times and in the matter prescribed by the contract.

IN WITNESS whereof the parties have hereunto set their respective hands and seals the day and year first above written.

For & on behalf of the TCIL

For & on behalf of the Contractor

Witness :-

Witness :-

1.

1.

2.

TCIL

88

GROUP-D

SECTION - 8

LIST OF SITES IN BIHAR

GROUP-D

S.NO.	DISTRICT HOSPITAL
1	BETIA
2	SIWAN
3	SHAHARSHA
4	SHIVHAR
5	MUZAFFARPUR
6	SUPOUL
7	MADHEPUR
8	BHAGALPUR
9	KHAGRIA
10	PURNIA



**Telecommunications Consultants India Limited
(A Government of India Enterprise)**

TENDER DOCUMENTS

FOR

**CONSTRUCTION OF SPECIAL CARE NEW BORN UNIT
(S.C.N.U) BUILDINGS IN 10 DISTRICT HEADQUATERS
GROUP – D IN THE STATE OF BIHAR**

NOTICE NO. TCIL/05/563/2/2011/CIVIL)/GROUP-D

(FINANCIAL OFFER)

**Telecommunications Consultants India Ltd.
TCIL Bhawan, Greater Kailash-I
New Delhi – 110048**