

EAST CENTRAL ZONAL OFFICE, PATNA

**LIFE INSURANCE CORPORATION OF INDIA**  
EAST CENTRAL ZONAL OFFICE, ENGG. DEPTT. (4<sup>TH</sup> FLOOR)  
"JEEVAN DEEP", EXHIBITION ROAD, PATNA – 800 001  
PHONE: 0612-2501118/2503014/2501103,  
E-mail: [ecz\\_engg@licindia.com](mailto:ecz_engg@licindia.com)  
AN ISO 9001:2015 CERTIFIED DEPARTMENT

**Invitation of E-Tender on Percentage Rate basis for up gradation of  
Fire Hydrant system with fire alarm system installed at ECZO,  
Jeevan Deep Building, Exhibition Road, Patna-800001**

## **BID – III (Part-I & II)**

**THIS DOCUMENT IS TO BE DOWNLOADED AND UPLOADED WITH  
DIGITAL SIGNATURE. SUBMISSION OF HARD COPY IS NOT REQUIRED.**

## PART-I

### CONTENTS

| Sl No. | Description                                                           | Page |     |
|--------|-----------------------------------------------------------------------|------|-----|
|        |                                                                       | From | To  |
| 1      | Cover Page                                                            | 1    | 1   |
| 2      | Contents                                                              | 2    | 2   |
| 3      | Conditions of Contract                                                | 3    | 30  |
| 4      | Proforma of Articles of Agreement ( Annexure – “A”)                   | 31   | 40  |
| 5      | Form of Bank Guarantee in lieu of Security Deposit ( Annexure – “B”)  | 41   | 43  |
| 6      | Form of Bank Guarantee to secure a lump sum Advance ( Annexure – “D”) | 44   | 46  |
| 7      | Letter to contractor from the Chief Engineer                          | 47   | 48  |
| 8      | Letter from contractor to the Chief Engineer                          | 49   | 50  |
| 9      | Instruction in regard to submission of online tenders                 | 51   | 55  |
| 10     | Appendix to conditions of contract                                    | 56   | 57  |
| 11     | General condition of Contract                                         | 58   | 65  |
| 12     | Technical specifications for fire fighting and fire alarm work        | 66   | 83  |
| 13     | Technical specifications for AMC                                      | 84   | 90  |
| 14     | Bill format                                                           | 91   | 95  |
| 15     | List of approved materials                                            | 96   | 102 |
| 14     | Special conditions regarding inspection of work                       | 103  | 103 |
| 15     | Forfeiture of earnest money                                           | 104  | 104 |

## **CONDITIONS OF CONTRACT**

### **1. INTERPRETATIONS:**

- 1.1 In construing these Conditions, the Specifications, the Priced Schedule of Quantities, Tender and Agreement, the following words shall have the meanings herein assigned to them except where the subject or context otherwise requires:
- 1.2 “Employer” shall mean THE LIFE INSURANCE CORPORATION OF INDIA and his (their) heirs, legal representatives, assignees and successors.
- 1.3 “Chief Engineer” shall mean the person occupying the post of head of the Zonal Engineering Department of the Corporation.
- 1.4 “Corporation’s Engineers” shall mean such Deputy Chief Engineers, Superintending Engineers and/or Executive Engineers of the Corporation, who shall from time to time be appointed by the Chief Engineer for supervising the work carried out by the Contractor or for any purpose in connection therewith:
- 1.5 The term “Site Engineer” shall mean the person appointed and paid by the Employer, acting under the order of the Corporation’s Engineer to superintend the work.
- 1.6 The Contractor shall mean the individual, firm or company whether incorporated or not, who is awarded the contract & shall include the legal representative of such individual or the persons composing such firm or company or the successors of such individual, firm or company & the permitted assignees of such individual, firm or company.
- 1.7 The “Site” shall mean the lands/buildings and/or other places on, in, into or through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
- 1.8 “This Contract” shall mean the Articles of Agreement, these Conditions, the General Instructions to Contractor, the General Preambles to Schedule of Quantities, Special Conditions, the priced Schedule of Quantities, the Specifications, the Appendices, the Drawings and other related correspondence.
- 1.9 “Act of Insolvency” shall mean any act of insolvency as defined by the Presidency Towns Insolvency Act, or the Provincial Insolvency Act or any amending Statute.
- 1.10 “Notice in Writing” or written notice shall mean a notice in written, typed or printed characters, sent (unless delivered personally or otherwise proved to have been received) by registered

post to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered.

- 1.11 Words importing persons include Firms and Corporations, words importing the singular only also include the plural and vice versa where the context so requires.
- 1.12 The titles of the Clauses shall not affect or alter the meaning of Clauses and are solely for the purpose of facilitating reference.
- 1.13 The following abbreviations shall be followed for the designations of various LIC Officers:

**DESIGNATIONS**

**ABBREVIATIONS**

|                                  |         |
|----------------------------------|---------|
| Executive Director (Engineering) | E.D.(E) |
| Zonal Manager                    | Z.M.    |
| Chief Engineer                   | C.E.    |
| Chief Architect                  | C.A.    |
| Deputy Chief Architect           | D.C.A.  |
| Deputy Chief Engineer            | Dy.C.E. |
| Superintending Engineer          | S.E.    |
| Senior Architect                 | S.A.    |
| Executive Engineer               | E.E.    |
| Deputy Senior Architect          | D.S.A.  |
| Asstt. Secretary                 | A.S.    |

- 1.14 Wherever the words “approved”, “directed”, “as required”, “selected” or words of like effect are used, it is to be understood that the approval/direction, requirement or selection of the Corporation’s Engineer are intended unless otherwise specified.
- 1.15 The words “as described” shall mean the description in the Special Conditions, Specifications, General Instructions, Drawings etc. of this tender.
- 1.16 The words “allow” shall mean that the Contractor shall include in his rates for the particular matter referred to.
- 1.17 “Day Work” shall mean items of labour and/or materials which in the opinion of the Corporation’s Engineer are not capable of being evaluated by the accepted method of measurement and analysis.

EAST CENTRAL ZONAL OFFICE, PATNA

## 2. SCOPE OF CONTRACT:

- 2.1 The Contractor shall carry out and complete the works in every respect in accordance with this Contract and in accordance with the directions and to the satisfaction of the Corporation's Engineer. The Corporation's Engineer may issue further drawings and/or written instructions, details, directions and explanation in regard to:
- The variation or modification of the Design, quality of works or the addition or omission or substitution of any work;
  - Any discrepancy in the Drawings or between the Schedule of Quantities and/or Drawings and/or Specifications;
  - The removal from the site of any materials brought thereon by the Contractor and the substitution of any other material thereof;
  - The removal and/or re-execution of any work executed by the Contractor;
  - The dismissal from the work of any persons employed thereupon;
  - The opening up for inspection of any work covered thereupon;
  - The amending and making good of any defects under relevant Clause giving details of defects after completion.
- 2.2 The Contractor shall forthwith comply with and duly execute all works comprised in such Instructions subject to the provisions of relevant specific conditions of the Contract. In the event of any dispute or difference of opinion the contractor shall refer the matter within 7 (seven) days of the issue of such instruction to the Chief Engineer whose decision shall be final & binding.
3. DISCREPANCIES:
- 3.1 If there are varying or conflicting provisions made in any one document forming part of Contract, the Chief Engineer shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.
- 3.2 The several documents forming the Contract are to be taken as mutually explanatory of one another, and the order of precedence shall be as follows;
- Special conditions
  - General preambles to schedule of quantities
  - General instructions
  - Conditions of contract
- 3.3 In case of discrepancies between the Schedule of Quantities, the specifications and/or drawings the following order of precedence shall be observed

EAST CENTRAL ZONAL OFFICE, PATNA

- (a) Description in Schedule of Quantities
- (b) Specifications of relevant Trade
- (c) Drawings; detailed drawings shall be followed in preference to small scale drawings and figured dimension in preference to scale.
- (d) Indian Standard Specifications of 'BIS'

**4. DRAWINGS AND SCHEDULE OF QUANTITIES:**

- 4.1 Two complete sets of the Drawings and Specifications and Schedule of Quantities shall be furnished by the employer to the contractor. Two copies of the additional Drawings, if any, shall be furnished within such time as the Chief Engineer may consider reasonable which may be necessary for execution of any part of the work. Such copies shall be kept on the work site and the CE and his representatives shall at all reasonable times have access to the same and they shall be returned to the EE by the Contractor on completion of the contract.

This Contract and the signed Drawings, Specifications and Schedule of Quantities shall remain in the custody of the Employer.

**5. CONTRACTOR TO PROVIDE EVERYTHING NECESSARY FOR EXECUTION OF WORK:**

- 5.1 Contractor shall provide everything necessary for the proper execution of the work according to the intent & meaning of the Drawings, Priced Schedule of Quantities and Specifications taken together, whether the same may or may not be explicitly shown or described therein provided that the same can reasonably be inferred there from and if the Contractor finds any discrepancy therein he shall immediately and in writing refer the same to the CE whose decision shall be final and binding on the Contractor.
- 5.2 The Contractor shall supply, fix and maintain at his cost during the execution of any work all the necessary Centering, Scaffolding, Staging, Planking, Timbering, Strutting, Shoring, Pumping, Fencing, Boarding, Watching and Lighting by night as well as by day, required not only for the proper execution and protection of the said work but also for the protection of the Public and the safety of any adjacent Roads, Streets, Cellars, Vaults, Ovens, Pavements, Walls, Houses, Buildings and all other erections, matters or things and the Contractors shall take down and remove any or all such Centering, Scaffolding, Staging, Planking, Timbering, Strutting, Shoring, etc., as occasion shall require or when ordered to do so, and shall fully reinstate and make good all matters and things disturbed during the execution of the work to the satisfaction of the Corporation's Engineer.

**AUTHORITIES NOTICES AND PATENTS:**

- 6.1 The Contractors shall conform to the provisions of any Acts of the Legislature relating to the work and to the Regulations and Bye-Laws of any Authority and or any Water, Lighting and other Companies and/or Authorities with whose system the structure is proposed to be connected and shall before making any variations from the Drawings or Specifications that may be necessitated by so conforming give to the CE written notice specifying the variations proposed to be made and the reasons for making them and apply for instructions thereon. In case the Contractor shall not within 7 (seven) days receive such instructions, he shall proceed with the work conforming with the Provisions, Regulations or Bye-Laws in question.
- 6.2 In particular, the Contractors shall be responsible to Register themselves under the Contract Labour (Regulation & Abolition) Act 1970 and Rules there under and any amendment thereto; they must comply with and carry out all the provisions and obligations under the said Act and Rules and furnish all information to Employer as may be required by it and shall indemnify the Employer against any penalties/claims arising from any default on their part.
- 6.3 The Contractor shall arrange to give all notices required by the said Acts, Regulations or Bye-Laws to be given to any Authority and to pay to such Authority or to any Public Office all fee that may be properly chargeable in respect of the work and lodge the receipts with the Employer.
- 6.4 The Contractors shall indemnify the Employer against all claims in respect of patent, rights, and shall defend all actions arising from such claims unless he has informed the Chief Engineer before any such infringement and received his permission to proceed and shall himself pay all royalties, licence fees, damages, costs and charges of all and every sort that may be legally incurred in respect thereof.
- 6.5 The Contractor should observe that his work shall not cause any nuisance to the Public in general and to the neighbouring occupants in particular.
- 6.6 Should the Contractor desire to work on Sundays, Holidays and during night hours, permission in writing from the Corporation's Engineer must be obtained in time. It shall be the responsibility of the Contractor to obtain permission from Civil Authorities, if necessary.

## SETTING OUT WORK:

7.1 The Contractor shall set out the work and shall be responsible for the true and perfect setting out of the same and for the corrections of the positions, levels, dimensions and alignment of all parts thereof. If at any time any error shall appear during the progress of any part of the work, the Contractor shall at his own cost rectify such error, if called upon, to the satisfaction of the Corporation's Engineer. The Contractor must not commence work until the outlines of the building and Centre line layout have been pegged out and approved by the Corporation's Engineer.

## 8. CONTRACTOR IMMEDIATELY TO REMOVE OFFENSIVE MATTER:

8.1 All soil, filth or other matter of an offensive nature taken out of any trench, sewer, drain, cesspool or other place shall not be deposited on the surface, but shall be at once carted away by the Contractor to some pit or place provided by him.

## 9. MATERIALS AND SAMPLES:

9.1 All the materials stores and equipment required for the full performance of the Contract must be provided through normal trade channels and must include applicable import duties and all applicable taxes and other charges, if any. They shall be of approved quality and the best of their kind available and the Contractor must be entirely responsible for the proper and efficient carrying out of the work. The Contractor shall order all materials required for the execution of the work from local as well as from outside sources if situation warrants so as early as necessary to the satisfaction of the Corporation's Engineer and to ensure that such materials are on site well ahead of requirement for use in the work. Non – availability of materials in local market will not be an issue behind slow progress of work.

9.2 Before ordering such materials, the Contractor shall get samples of the materials approved well in time. Preference shall be given to ISI marked products and approved brands of requisite quality as mentioned in the tender. For materials, which are neither approved brands nor ISI marked, the same shall be got tested from approved laboratories at the Contractor's cost before approval. Approved brand and ISI marked product will also be tested if desired by the CE and if the test results are satisfactory, the cost of testing shall be borne by the Employer otherwise by the Contractor. No claim will be allowed for delay to the progress of work caused by test. If called upon by the Executive Engineer the Contractor shall produce proof for having arranged for the supply of materials well in time.

The Contractor shall furnish well in time before work commences at his own cost, any samples of workmanship that may be called for by the Corporation's Engineer for his approval and any Contractor 8 Chief Engineer

further samples in case of rejection until such samples are approved. Such samples when approved shall be the minimum standard for the work to which they apply. In case of items like suspended ceiling, partitions, etc. typical sample panels or proto-types shall be erected in position for approval before undertaking work. Rates quoted shall cover for such preliminary work.

**10. ACCESS:**

- 10.1 Any of the Corporation's Engineers or any persons authorized by any one of them shall at all reasonable time have free access to the work and/or the workshops, factories or other places where materials are being prepared or constructed for the Contract and also to any place where the materials are lying or from which they are being obtained and the Contractor shall give every facility to all of them necessary for inspection and examination and test of the materials and workmanship. Except the representatives of the Public Authorities, no person shall be allowed on the work at any time without the written permission of the Corporation's Engineer.

If any work is to be done at a place other than the site of the work, the Contractor shall obtain the written permission of the Corporation's Engineer for doing so.

**11. CONTRACTOR'S SUPERVISION & MINIMUM REQUIREMENT OF TECHNICAL STAFF:**

- 11.1 The Contractor shall either himself supervise the execution of the contract or may appoint a Competent Agent approved by the CE to act in his stead.
- 11.2 Where the contractor is not a qualified Engineer or even if he is so qualified, he cannot in the opinion of C.E., give his full personal attention to the works, he shall at his own expense employ person(s) possessing the qualification and experience as described hereunder as his accredited agent to supervise the works and to receive instructions from Corporation's Engineers. Any directions, instructions or notices given by the Corporation's Engineer to such supervisor(s) shall be deemed to be given to the contractors.

**a. FOR WORKS COSTING UPTO Rs. 100 LAKHS :**

A qualified resident Engineer having a Government recognized Diploma in Civil Engineering and minimum of 2 years experience on building construction site.

**b. FOR WORKS COSTING MORE THAN Rs. 100 LAKHS & UPTO Rs. 200 LAKHS :**

A qualified resident Engineer having a Recognised Degree in Civil Engineering or equivalent qualification and minimum of 2 years experience on building construction site/s

EAST CENTRAL ZONAL OFFICE, PATNA

or a recognized Diploma in Civil Engineering with minimum 5 years experience on such construction jobs.

c. **FOR WORKS COSTING MORE THAN Rs.200 LAKHS :**

- i) A qualified resident Engineer having a Recognised Degree in Civil Engineering and minimum of 3 years experience of such major construction site/s or a recognized diploma in Civil Engineering with 8 years experience.
- ii) In addition the contractor shall employ suitable number of supervisors with recognized degree / diploma in the relevant branches or recognized qualification & experience in the relevant trades for proper execution of the work as approved by the Chief Engineer.

d. The CE may vary any of the above qualification / experience at his discretion if so warranted by conditions prevailing and applicable to any particular work such as Air-conditioning, HT, and Interiors etc.

e. If the contractor fails to employ suitable person(s) to supervise the work or fails to appoint replacement(s) when necessitated, amount as stipulated in the Appendix to the conditions of contract shall be recovered from the contractor for each Engineer and each supervisor for the period of non-employment.

**12. DISMISSAL OF WORKMEN:**

12.1 The Contractor shall, on the instruction of the Corporation's Engineer, immediately dismiss from the work any person employed thereon, who may, in the opinion of the Corporation's Engineer, be unsuitable or incompetent or who may misconduct himself and such person shall not be again employed or allowed on the work without the permission of the Corporation's Engineer.

**13. DATES OF COMMENCEMENT AND COMPLETION:**

13.1 The "Date of Commencement" shall be as stated in the Work Order and the Contractor shall thereupon and forthwith begin the work and shall regularly proceed with and complete the

same on or before the "Date of Completion" stated in the Work Order, subject to the provisions for extension of time hereinafter contained.

**14. ASSIGNMENT:**

- 14.1 The whole of the work included in the Contract shall be executed by the Contractor and the Contractor shall not directly or indirectly transfer, assign or underlet the Contract or any part, share of interest therein nor shall he take a new partner without the written consent of the CE and no subletting shall relieve the Contractor from the full and entire responsibility of the Contract or from the active superintendence of the work during its progress.

**15. DEVIATION, VARIATION, EXTRA/DEVIATED ITEMS AND PRICING:**

- 15.1 The Contractor should note that unless otherwise stated, the tender is strictly on Item Rate basis and his attention is drawn to the fact that rates for each and every item should be correct, workable and self supporting. The quantities in the Schedule of Quantities approximately indicate the total extent of work and no variation i.e. additions, omissions or subtractions shall vitiate the Contract. No liability shall attach to the Employer for any error therein or variation there from.
- 15.2 The contractor may when authorized and shall when directed, in writing by the CE or the Corporation's Engineers, whom the CE may for that purpose appoint, add to, omit from, make alterations in, substitutions for, or vary the works shown upon the Drawings or described in Specifications or included in the priced Schedule of Quantities but the Contractor shall make no additions, omissions, alterations, substitutions or variations without such authorization or direction. A verbal authority or direction by the CE, if confirmed by the contractor in writing within 7 (seven) days, be deemed to have been given in writing.
- 15.3 The rates of such altered, additional or substituted works shall be determined in accordance with the following.
- a. The net rates or prices in the original tender shall determine the valuation of the extra work where such extra work is of similar character and executed under similar conditions as the work priced therein.
  - b. The net price of the items in the original tender shall determine the value of the items omitted. However, if omissions vary the conditions under which any remaining items of the work are carried out or if the amount of any omission relative to the amount of the whole of the Contract works or to any part thereof shall be such that in the opinion of the Chief Engineer, the net rate or price contained in the Priced Schedule of Quantities

- or Tender or for any item of work involves loss or expenses beyond that reasonably contemplated by the Contractor and is by reason of such omission rendered unreasonable or inapplicable, the Chief Engineer shall fix another rate or price as in the circumstance he shall think reasonable and proper.
- c. If the rate for any altered, additional, or substituted item of work is not specified in the schedule of quantities, the rate for that item shall be derived from the rate for the nearest similar item specified therein.
- d. If the rate for altered, additional or substituted item of work cannot be determined in the manner specified above, then such items of work shall be priced on the basis of coefficients of labour and materials as given in the latest CPWD rate analysis handbook and rates for labour and materials wherever applicable shall be the market rate prevailing at the time of execution.
- e. Where such co-efficient are not available in C.P.W.D. rate analysis, the actual Labour/Materials involved and recorded by the Executive Engineer in executing the items shall be considered.
- f. Where extra work cannot be properly measured or valued, the Contractor shall be allowed "Day Work" prices at the net rates stated in the Tender or the Priced Schedule of Quantities or, if not so stated, then in accordance with the local "Day Work" rates and wages for the district, provided that in either case vouchers specifying the date and time (and if required by the EE the names of workmen employed) and materials incorporated be delivered for verification to the EE or his representative at or before the end of the week following that in which the work has been executed. The EE is not bound to recognize the cost of materials furnished in vouchers; the CE at his discretion will fix the price of such materials based upon market value.
- g. While fixing rates of extra items 15% (Fifteen percent only) shall be allowed over & above the basic rate of material (without GST), T & P, water charges and labour to cover all supervision, overheads, profits and all other applicable taxes/cess. GST on works contract will be paid separately.
- h. Where the quantities of any item in the schedule exceeds by 100% in foundation and in inth, and 50% in super-structure (above plinth), these extra quantities over 100% & 50% respectively will be treated as extra items of work and priced accordingly as above. [Items such as roads, pavements etc. shall be considered as below plinth]. The

decision of CE for terming items below or above plinth is final & binding on the contractor.

- i. For all extra items of work, the contractor should submit to the concerned Corporation's Engineer the necessary particulars along with his analysis and the rate he proposes to claim for consideration within a period of 4 (four) weeks from the time of cropping up of any authorized extra / deviated item. He shall also ensure that all the authorized claims are included in the final bill. If the contractor fails to submit his claim within the stipulated period or the period duly extended by the Corporation's Engineer, then the CE shall proceed to fix the rate for the item(s) and the same shall be final and binding on the contractor.
- j. The Contractor shall note that Extra/Deviated items claim and/or any other claim whatsoever if submitted after submission of his Final Bill, will not be entertained and considered by the Employer. The Contractor shall not be allowed to make any Additions/ Alterations/ Revisions / Changes/ Modifications/ Variations in the final bill, after the final bill is submitted by him.

## **16. SUB-CONTRACTORS:**

- 16.1 All specialist Merchants, Tradesmen and others, executing any work or supplying, fixing any goods for which provisional sums are included in the Schedule of Quantities and/or Specifications, who may be nominated or selected by the CE, who shall be the final authority are hereby declared to be Sub-Contractors and are herein referred to as nominated Sub-Contractors.
- 16.2 No nominated Sub-contractor shall be employed on or in connection with the work against whom the Contractors shall make reasonable objection or (save where the CE and the Contractor shall otherwise agree) who will not enter into a Contract providing:-
  - a. That the nominated Sub-Contractor shall indemnify the Contractor against the same obligation in respect of the Sub-Contractor as the Contractor is under, in respect of this Contract;
  - b. That the nominated Sub-Contractor shall indemnify the Contractor against claims in respect of any negligence by the Sub-Contractor or his servants or agents or any misuse by him or them of any scaffolding or other plant or the property of the Contractor or under any Workmen's Compensation Act in force.

## **17. THIRD PARTY LIABILITY, DAMAGE TO NEIGHBOURING PROPERTY, LOSS OF MATERIAL AND WORKMEN'S COMPENSATION:**

- 17.1 The Contractor shall be responsible for all injury to persons, animals or things, and for all damage to structural and/or decorative part of property which may arise from the operations or neglect of himself or of any Sub-contractor or any of his Sub-Contractor's employees, whether such injury or damage arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of his Contract. This Clause shall be held to include inter-alia, any damage to Building, whether immediately adjacent or otherwise and any damage to roads, streets, footpaths, bridges, or ways as well as all damage caused to the building, and the works forming the subject of this Contract by frost, rain, wind or other inclemency of the weather. The Contractor shall fully indemnify the Employer and hold him harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of all and any claim made in respect of injury or damage under any acts of Government or otherwise and also in respect of any award or compensation or damages consequent upon such claim.
- 17.2 The Contractor shall fully indemnify the employer against any loss, damage or deterioration for whatever reason, of all materials brought at site and especially material supplied by or paid for partly or wholly by the employer.
- 17.3 The Contractor shall reinstate all damage and loss of every sort mentioned in this Clause so as to deliver up the whole of the Contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of the third parties.
- 17.4 The Contractor shall fully indemnify the Employer against all claims which may be made against the Employer by any member of the Public or other third party in respect of anything which may arise in respect of the works or in consequence thereof.
- 17.5 The contractor shall at his own expense arrange to effect from the date of commencement & maintain till the date of virtual completion of contract, with any licensed general insurance company, a **POLICY OF INSURANCE( Contractor's All Risk Policy)** to cover all such risks detailed above viz. loss, damage & third party liability etc. The policy shall be of an amount as mentioned in Appendix to Conditions of contract and in the joint names of the employer & contractor and shall be deposited with the employer and renewed as required from time to time during the currency of the contract.

The Contractor's All Risk Policy will be for the Contract Value and Third Party liability will be 7.50% of the contract value. The date for submitting the renewed Insurance Policy, if any will be 15 days prior to the last of expiry of the existing policy, failing which LIC of India may insure/renew insurance and apply penal cost on the contractor i.e. Premium Charges + Rs. 10,000.00 as penalty.

- 17.6 The Contractor shall also fully indemnify the Employer against all claims which may be made upon the Employer, whether under the **WORKMEN'S COMPENSATION ACT** or any other **STATUTE** in force during the currency of this Contract or at Common law in respect of any Employee of the Contractor or any Sub-Contractor and shall at his own expense effect and

EAST CENTRAL ZONAL OFFICE, PATNA

maintain until the Virtual completion of the work, with “licensed General Insurance Company” a **POLICY OF INSURANCE** of adequate amount in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the employer & renew the same as required from time to time during the currency of the Contract.

The contractor should obtain the Workmen’s Compensation Policy with mutual agreed between LIC of India. The date for submitting the renewed Insurance Policy, if any will be 15 days prior to the last of expiry of the existing policy, failing which LIC of India may insure/renew insurance and apply penal cost on the contractor i.e. **Premium Charges + Rs. 10,000.00 as penalty.**

- 17.6 The Contractor shall be responsible for anything, which may be excluded from the Insurance Policies above referred to, and also for all other damage to any property arising out of or incidental to the negligence or defective carrying out of the Contract.
- 17.7 The amount of insurance to be taken for the above policies will be jointly decided between the contractor and the employer before issue of acceptance letter based on the tendered cost, nature of work, location of site, local hazards etc.
- 17.8 In default of the Contractor insuring as provided above, or having insured failing to renew the same as required the Employer on his behalf may so insure/renew and may deduct the premiums paid from any monies due or which may become due to the Contractor together with penalty as the CE deems appropriate.
- 17.9 The Contractor shall also fully indemnify the Employer in respect of any costs, charges or expenses arising out of any claim or proceedings at law and also in respect of any award of compensation of damages arising there from.
- 17.10 The Employer shall be at liberty and is hereby empowered to deduct fully the amount of any damages, compensation costs, charges and expenses arising or accruing any such claim of damage from any sum or sums due or to become due to the Contractor.

**18. DELAY AND EXTENSION OF TIME:**

- 18.1 If the works be delayed due to any of the following:
- (a) by force majeure ,
  - (b) by reason of any exceptionally inclement weather,
  - (c) by reason of proceedings taken or threatened by, or disputes with, adjoining or neighbouring owners, or public authorities,
  - (d) by the work, or delays, of other Contractors or Tradesmen engaged by the Employer,
  - (e) by reason of any additional work or instruction ordered by the employer,
  - (f) by reason of Civil Commotion, local commotion of workmen or strike or lock-out affecting any of the building trades,

EAST CENTRAL ZONAL OFFICE, PATNA

- (g) in consequence of the Contractor not having received in due time necessary instructions from the CE for which he shall have specifically applied in writing,
  - (h) from other causes which the CE may certify as beyond the Control of the Contractor,
  - (i) by reason of non-payment of interim certificate at specified time,
- Then upon the happening of any such event causing delay, the contractor shall immediately, give notice thereof in writing to the Corporation's Engineer, but shall nevertheless use constantly his best endeavours to make good this delay.

18.2 Request for extension of time shall be made by the contractor **at the earliest** of the event causing delay.

18.3 In case of strike or lockout the Contractor shall give written notice thereof to the CE as soon as possible but he shall nevertheless constantly use his endeavours to prevent delay and shall do all that may reasonably be required to the satisfaction of the CE to proceed with the work.

18.4 The CE shall make a fair and reasonable assessment of the delay and grant extension of time accordingly. Such extension shall be communicated to the contractor by the Corporation's Engineer immediately within **30 (Thirty) days of the date of receipt of request for extension**. Non-application by the contractor for extension shall however not be a bar for giving fair and reasonable extension which shall be as decided by the CE.

18.5 The decision of the CE as communicated by the Corporation's Engineer to the contractor on the extension of time shall be final & binding.

18.6 No claim in respect of compensation or otherwise, howsoever arising, as a result of extension granted under the above conditions shall be admissible.

**19. COMPENSATION IN THE FORM OF PENALTY FOR DELAY OF WORK AND REWARDS FOR EARLY COMPLETION:**

19.1 The Contractor shall submit a Time and Progress Chart (CPR/PERT/Quantified Bar Chart) within 10 (Ten) days of Letter of intent and get it approved by the Chief Engineer, LIC of the Zone. The Milestone Chart shall be prepared as produced below in direct relation to the time stated in the contract documents for completion of items of the works. It shall indicate the forecast (milestones) of the dates of commencement and completion of various items, trades, sections of the work and may be amended as necessary by agreement between the Chief Engineer, LIC and the Contractor within the limitations of time stipulated in the Contract documents and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work exceeds one month ( save for special jobs for which a separate program has to be agreed upon) complete as per tender terms & conditions:

EAST CENTRAL ZONAL OFFICE, PATNA

The physical progress report including photographs shall be submitted by the contractor on the prescribed format & the intervals (not exceeding one month) as decided by the Chief Engineer. The compensation for delay as per clause shall be leviable at intermediate stages also, in case the required progress is not achieved to meet the above time deadlines of the completion period and /or milestones of time and progress chart, provided always that the total amount of Compensation in the form of Penalty for delay to be paid under this condition shall not exceed 10% of the tendered value of work.”.

**Compensation in the form of Penalty for delay of work @ 1.5% of tendered value of work per month of delay to be computed on per day basis.**

The amount of compensation in the form of Penalty shall be adjusted or set-off against any sum payable to the Contractor under this or any other contract with LIC. In case, the contractor does not achieve a particular milestone mentioned elsewhere in the tender document, or the re-scheduled milestone(s), the amount shown against that milestone shall be withheld and to be adjusted against the compensation levied at the final grant of Extension of Time if needed. Withholding of this amount on failure to achieve a milestone shall be automatic without any notice to the Contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount.”

**19.2 REWARDS FOR EARLY COMPLETION:**

If the Contractor completes the work in advance before the stipulated period stated in the “Appendix to Condition of Contract” in all respects and the Chief Engineer certifies in writing that in his opinion the same has been completed, the reward for early completion is applicable and payable to the contractor. If contractor completes the works 3 (three) months in advance in all respects, 0.50% of final contract completion value shall be rewarded. If contractor completes the works less than 3 (three) months in advance, 0.10% of final contract completion value shall be rewarded. The amount, if payable, shall be paid along with final bill. For firefighting work only appreciation letter will be given to the contractor.

**20. FAILURE BY CONTRACTOR TO COMPLY WITH CE’S INSTRUCTIONS :**

- 20.1 If the Contractor after receipt of written notice from the CE, requiring compliance with such further Drawings and/or his instructions, fails within 7 (seven) days to comply with the same the CE may employ and pay other persons to execute any such work whatsoever as may be necessary to give effect thereto and all additional costs incurred in connection therewith shall be deducted from any money due or to become due to the Contractor.

**21. PAYMENT OF BILLS :**

**a. MEASUREMENT OF WORKS**

- 21.1 The EE may, from time to time, intimate the contractor that he requires the work to be measured and the contractor shall forthwith attend or send a qualified representative to assist the EE or his representative in taking such measurements and calculations and to furnish all particulars or to give all assistance required by either of them. All items having a financial value shall be entered in the Measurement Book. All measurements and levels shall be taken jointly by the Contractor or his authorized representative and Site Engineer or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by both the parties in token of their acceptance. If any of the measurements recorded are objected by any one of the party, a note shall be made to that effect with reason, signed by both parties and referred to Corporation's Engineer whose decision in the matter shall be final and binding. Measurements can also be recorded through electronic medium where specifically approved by Chief Engineer.
- 21.2 Should the contractor not attend or neglect or omit to send such representative, then the measurements taken by the EE or representative shall be taken to be correct measurements of the work. Wherever not specified in the "Schedule of Quantities or elsewhere" the mode of measurements shall be in accordance with the latest brochure issued by the Indian Standards Institutions (now renamed as Bureau of Indian Standards) on "Method of measurement of Building works".
- 21.3 The Contractor or his representative may, at the time of measurement, take such notes and measurements as he may require.
- 21.4 All authorized extra work. Omissions and all variations made without the Chief Engineer's knowledge, if subsequently sanctioned by him in writing, shall be included in such measurement.
- 21.5 If the contractor or his authorised representative does not record the measurements periodically for the completed works, then the site Engineer shall take measurements after giving notice in writing of at least 3 (three) days. Measurements recorded in the absence of Contractor shall be intimated with a copy of such measurements to the contractor. If the contractor fails to countersign or record objections within a week from the date of measurement, then such measurement recorded in absence by the Site Engineer shall be deemed to be accepted by and binding on the Contractor.
- 21.6 The Contractor shall, without any extra charge provide all assistance with every appliance, labour and other things necessary for taking measurements (either by him or by site Engineer) and recording levels including test checking of such measurements by any person authorised by the Employer.

- 21.7 All work shall be measured net as fixed in its place. All measurements of 'cutting' shall be held to include for the consequent wastage on the materials used.
- 21.8 Except where any general or detail description of the works expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items for which procedure is not covered in the specification, measurement shall be taken in accordance with the relevant Standard Method of measurement issued by BIS and if for any item no such standard is available then a mutually agreed method shall be followed.
- 21.9 Measurements of all hidden/concealed items of work including extra items if any, such as, work in foundations including excavations, plinth filling, masonry, concrete etc. steel in all R.C.C. work, pipe to be encased etc. shall be jointly recorded by the contractor and Site Engineer or his authorised representative before they are covered up. Immediately after the work is ready for measurements, Contractor will give specific notice to the Site Engineer for recording the measurements. If the Site Engineer or his authorised representative fails to record the measurements, the Contractor will refer the matter to the Corporation's Engineer for instructions, but in no case shall cover up work without the latter's permission.

## **22. PAYMENTS:**

- 22.1 The contractor shall be paid by the Employer, from time to time, by installment under Interim Certificate to be issued by the EE to the Contractor on account of the work executed, when in the opinion of the EE, work to the approximate value named in the Appendix to the conditions of Contract as "Value of work for Interim certificate" (or less at the reasonable discretion of the Executive Engineer) has been executed in accordance with this contract, subject however to a retention of the percentage of such value mentioned in Appendix to the Conditions of Contract hereto as "Retention percentage on account of Security Deposit". The Interim Certificate shall be based upon interim Bills of Running Account Bills to be prepared by the Contractor and supported by the detailed measurements. The EE may include in the Interim Certificate such amount as he may consider proper on account of materials delivered upon the site by the contractor for use in the work, after satisfying price of materials on basis of vouchers/bills submitted by the contractor. In case any material have been supplied by the Employer to the contractor in connection with the work, necessary recovery for the same shall be effected from the bills of the contractor by the CE at the issue rates of such materials as stipulated while calling for tenders and in other cases at a stock rate or market rates of such materials, whichever is higher. The contractor will, however, not be entitled to modify his rates for items of work requiring use of such materials and when the work has been virtually completed and the CE shall have certified in writing that it

EAST CENTRAL ZONAL OFFICE, PATNA

has been so completed on the basis of detailed measurements and after obtaining written endorsement by the CE that the CE/ Deputy Chief Engineer has made a final Scrutiny and that there are no disputed items, rates of quantities, the contractor shall be paid by the Employer in accordance with certificate to be issued by the CE the sum of money named in the Appendix as "Installment after Virtual Completion" and the contractor shall be entitled to the payment of the final bill in accordance with the final certificate to be issued in writing by the Deputy Chief Engineer with the approval of the CE with expiration of the period referred to as "Defects Liability Period", in the Appendix to Conditions of Contract hereto from the date of Virtual Completion or as soon after the expiration of such period as to work shall have been finally completed and all defects made good according to the true intent and meaning hereof, whichever shall last happen. Provided always that the issue by the EE of any certificate during the progress of the works or at after their completion shall not relieve the contractor from his liability under Clause (2) in cases of fraud, dishonesty or fraudulent concealment relating to the work of materials or to nay matter dealt with in the certificate in case of all defects and insufficiencies in the work or materials which a reasonable examination would not have disclosed. No certificate of the Deputy Chief Engineer or Executive Engineer shall of itself be conclusive evidence that any work or materials to which it related are in accordance with the contract.

The Chief Engineer may make any correction in previous certificate which shall have been issued by the Executive Engineer/Superintending Engineer.

Payment upon the EE's certificate shall be made within the periods named in the Appendix "Period for honouring Interim Certificate" after such a certificate has been delivered to the Employer.

The CE shall have power to withhold any certificate if the work or any parts thereof are not being carried out to his satisfaction.

- 22.2 Provided always that the issue by the Corporation's Engineer of any Certificate during the progress of the works or after their completion shall not relieve the Contractor from his liability in cases of fraud, dishonesty or fraudulent concealment relating to the work or materials or any matter dealt with in the Certificate in case of all defects and insufficiencies in the work or materials which a reasonable examination would not have disclosed. No Certificate of the Corporation's Engineer shall of itself be conclusive evidence that any work or materials to which it related are in accordance with the Contract.

Payment upon the Corporation's Engineer's Certificate shall be made within the periods named in the Appendix "Period for honouring Interim Certificate" after such a Certificate has been delivered to the Employer;

22.4 The CE shall have power to withhold any Certificate if the work or any parts thereof are not being carried out to his satisfaction. However, if the final certificate is not issued within the period as mentioned under Clause No.22.5, 26 due to Audit para by CTE etc., the amount involved for such items of deficient work as decided by Chief Engineer would be withheld. The same would be allowed as agreed upon by the CTE & the Chief Engineer and the final certificate would accordingly be issued and final bill passed. For such withheld amount, a simple interest @ 6% per annum shall be paid to the contractor along with the said payment. Such interest will be calculated from the last date (as mentioned in Appendix to Conditions of Contract) for honoring final certificate till the date of payment.

22.5 The measurements and valuation in respect of the Contract shall be completed within the "period of Final Measurement" stated in the Appendix or if not so stated then within six months of the completion of the contract works as defined in Clause (26) hereof. No further claim shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished.

22.6 The final certificate shall be based on the submission of final measurements or overall measurements of the work (to be taken if so directed by Corporation's Engineer) with all relevant details similar to 22.1 above. The CE may direct the Contractor to resubmit details if the same are found incomplete to issue the final certificate and his decision to accept the details is final and binding on the Contractor. Final Certificate shall be issued by the CE after the conditions are met with as per 22.4, 22.5, 22.6 and 26 and contractor's submission of **No Claim certificate cum receipt** as per the Proforma given in Appendix to Conditions of Contract.

### 23. SECURED ADVANCE AGAINST MATERIALS

23.1 The Contractor shall be entitled to be paid advance along with interim bill against materials which are not perishable and which are in the opinion of Corporation's Engineer, required for the works and have been brought on site for incorporation in the work but have not been so incorporated and are safeguarded against loss due to any cause whatsoever, (refer clause no-17). The amount of such advance against materials shall be arrived at on the following basis:

- a) 80% of the market value of materials required for the work and brought on site.

**OR**

80% of the cost of such materials (brought on site) as derived from the relevant accepted tender rate for the particular item involving such materials, whichever is lower.

Such advance payment made against materials shall be recovered from or adjusted from the interim bills as and when the materials are utilized in the work.

Examples of certain perishable materials on which no advance shall be paid are Sand, Paint, Bitumen, Hard Boards/Soft Boards and other paper products, Petroleum Products, Coal Tar, and Insulating Boards etc.

- 23.2 In case of dispute, the decision of the Chief Engineer on whether advance payment can be made against specific materials shall be final and binding.

**24. UNFIXED MATERIALS AND EQUIPMENTS:**

- 24.1 All tools, plants and materials brought to the site by the Contractor shall vest in the Employer and shall not be removed from the site of works except by permission of the Corporation's Engineer in writing. The Employer shall have a lien on these materials and plants.

**25. REMOVAL OF IMPROPER WORK:**

- 25.1 The Corporation's Engineer shall during the progress of the work have power to order in writing from time to time the removal from the work within such reasonable time or as may be specified in the order, of any materials, which in their opinion are not in accordance with the Specifications or instructions, the substitution of proper materials and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the Drawings and Specifications or Instructions and the Contractor shall forthwith carry out such an order at his own cost. In case of default on the part of the Contractor to carry out such an order, the CE shall have the power to employ other persons to carry out the same and all expenses consequent thereon or incidental thereto as certified by the EE shall be borne by the Contractor and may be deducted from any amounts due or that may become due to the Contractor.

**26. VIRTUAL COMPLETION:**

- 26.1 The work shall be completed in accordance with the Contract and to the entire satisfaction of Chief Engineer. All unused materials, tools, plants, scaffoldings, temporary structures, hutments and things belonging to the Contractor shall be removed and the site of works cleared of rubbish and all waste materials by the contractor at his own expenses and delivered up tidy to the employer. After completion of the work, the contractor will serve a written notice to the CE to this effect. The Chief Engineer after satisfying himself shall thereupon approve the virtual completion. The Defect Liability Period shall commence from the date of such certification.

**DEFECTS AFTER COMPLETION:**

EAST CENTRAL ZONAL OFFICE, PATNA

- 27.1 The defects, shrinkage, settlements or other faults, which may appear within “the Defects Liability Period, stated in the “Appendix to the Conditions of Contract” or if not stated then, within 24 (twentyfour) months after virtual completion of the work, arising on account of materials or workmanship not in accordance with the Contract shall, upon the directions in writing of the Corporation’s Engineer and within such reasonable time specified therein, be amended and made good by the Contractor at his own cost unless the CE shall decide that he ought to be paid for such amendment and for making good, and in case of default, the CE may employ and pay other persons to amend and make good such defects, shrinkage, settlement or other faults, and all damages, loss and expenses consequent thereon or incidental thereto shall be recovered from any monies due or that may become due to the Contractor. The CE may in lieu of such amending and making good by the Contractors, deduct from any money due or that may become due to the Contractor, a sum to be determined by the CE equivalent to the cost of amending such work. Should any defective work have been done or materials supplied by any Sub-Contractor employed on the work, who has been nominated or approved by the CE as provided in Clause No.16 the Contractor shall be liable to make good in the same manner as if such work or material had been done or supplied by the Contractor and been subjected to the provisions of this Clause and Clause No.2 hereof. The Contractor shall remain liable under the provision of this Clause notwithstanding the payment of any Certificate or the passing of any accounts.

**28. PROVISIONAL SUMS, APPLICATION OF:**

- 28.1 For all the work listed under items for which provisional sums are provided in the tender, the CE reserves the right to invite separate tenders or select or order from any manufacturer or firms at his discretion and reserves to himself the right of paying direct to persons or firms for any such work. The Contractor will not have any claims over these items, but if tenders are invited for such items, he will also be invited to quote along with others.
- 28.2 If ordered by the CE, Contractor shall be required to carry out provisional sum items at the same conditions and rates as applicable for this Contract.

**29. OTHER PERSONS ENGAGED BY THE EMPLOYER:**

- 29.1 CE reserves the right to execute any work not included in this Contract, which he may desire to have carried out, by other persons and the Contractor shall allow all reasonable facilities and the use of his scaffolding and plant for the execution of such work, but is not required to provide any special plant or materials for the execution of such work except by special arrangement with the Employer. Such work shall be carried out in such manner as not to impede the progress of the work included in the Contract and the Contractor shall not be responsible for any damage or delay which may happen to or be occasioned by such work.

**SUSPENSION BY THE CONTRACTOR:**

- 30.1 If the Contractor except on account of any legal restraint upon the Employer preventing the continuance of the work, shall suspend the work or in the opinion of the CE shall neglect or fail to proceed with due diligence in the performance of his part of the Contract or if he shall make default in respect of Clause No.2, the Employer shall have the power to give notice in writing to the Contractor requiring that the work be proceeded within a reasonable manner and with reasonable dispatch. Such Notice shall purport to be a notice under this clause. After such notice is given, the Contractor shall not be at liberty to remove from the site of the work or from any ground contiguous thereto any plant or materials belonging to him, which shall have been placed thereon for the work and the Employer shall have a lien upon all such plant and materials to subsist from the date of such notice being given until the notice shall have been complied with. If the Contractor shall fail for 7 (seven) days after such notice given to proceed with the work as therein prescribed, the CE may proceed as provided in Clause No.31.

**31. DETERMINATION OF CONTRACT BY EMPLOYER:**

- 31.1 If the Contractor (being an individual or a firm) commit any "Act of Insolvency" or shall be adjudged as Insolvent or shall make an assignment or composition of the greater part in number or amount of his creditors or shall enter into a deed of assignment with his creditors, or being an Incorporated Company shall have an order made against him or pass an effective resolution for winding up either compulsorily or subject to the supervision of the Court or Voluntarily or if the official Assignee of the Contractor shall repudiate the Contract or if the official Assignee or the Liquidator in any such winding up shall be liable within 7 (seven) days after notice to him requiring him to do so, to show to the reasonable satisfaction of CE that he is able to carry out and fulfill the Contract and if required by the CE to give security therefore or if the Contractor (whether an Individual Firm or Incorporated Company) shall suffer execution to be issued or if the Contractor shall suffer any payment under this Contract to be attached by or on behalf of any of the creditors of the Contractors or if the contractor shall assign or sublet the Contract without the consent in writing of the CE first obtained or if the Contractor shall charge or encumber this Contract or any payment due or which may become due to the Contractor there under, or if the CE shall certify in writing that in his opinion the Contractor,
- a. has abandoned the Contract, or
  - b. has failed to commence the work, or has without any lawful excuse under these conditions suspended the progress of the work for 7 (seven) days after receiving from the CE written notice to proceed, or
  - c. has failed to proceed with work with such due diligence and failed to make such due progress as would enable the work to be completed within the time agreed upon, or

EAST CENTRAL ZONAL OFFICE, PATNA

- d. has failed to complete the work within the stipulated date including authorized extensions or
- e. has failed to remove the materials from the site or to pull down and replace the work within 7 (seven) days after receiving a written notice from the Corporation's Engineer that the said materials or work were condemned or rejected or
- f. has neglected or failed persistently to observe and perform all or any of the acts, matters, or things, by this Contract to be observed and performed by the Contractor for 7 (seven) days after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same, or
- g. has to the detriment of good workmanship or in defiance of the CE's instructions to the contrary sub-let any part of the Contract.

then and in any of the said causes, the CE notwithstanding any previous waiver, after giving 7 (seven) days notice in writing to the Contractors, determine the Contract, but without thereby affecting the powers of the CE or the obligations and liabilities of the Contractor, the whole of which shall continue to be in force as fully as if the contract has not been so determined and as if the work subsequently executed had been executed by or on behalf of the Contractor. And further, the Employer, his agents or servants, may enter upon and take possession of the work and all plant, tools, scaffolding, sheds, machinery, steam and other power, utensils and materials, lying upon the premises or the adjoining lands or road and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the work or by employing any other Contractors or other person or persons to complete the work, and the Contractor shall not in any way interrupt or do any act, matter, or thing to prevent or hinder such other Contractor, other persons or person employed for completing and finishing or using the materials and plant for the work. When the work shall be completed or as soon thereafter as convenient, the CE shall give a notice in writing to the Contractor to remove his surplus materials and plant and should the Contractor fail to do so within a period of 14 (Fourteen) days after receipt thereof by him, the Employer may sell the same by public auction and shall give credit to the Contractor for the amount so realized. The CE shall thereafter ascertain and certify in writing under his hand what (if anything) shall be due or payable to or by the Employer for the value of the said plant and materials so taken possession of by the Employer and the expense or loss which the Employer shall have been put to in getting the work to be so completed, and the amount, if any, owing to the Contractor and the amount, which shall be so certified shall thereupon be paid by the Employer to the Contractor or by the Contractor to the Employer, as the case may be and the Certificate of the CE shall be final and conclusive between the parties.

**32. TERMINATION OF CONTRACT BY CONTRACTOR:**

If payment of the amount payable by the Employer under any Certificate of the EE shall be in arrears as unpaid for 60 (sixty) days after notice in writing requiring payment of the amount with interest of aforesaid shall have been given by the Contractor to the Employer, or if the work be stopped for six months under order of the CE or by any injunction or other order of any Court of Law, then and in any of the said cases, the Contractor shall be at liberty to determine the Contract by notice in writing to the Employer and he shall be entitled to recover from the Employer payment for all the work executed and for any loss, he may sustain upon any plant or material supplied or purchased or prepared for the purpose of the Contract.

32.2 In arriving at the amount of such payment, the net rates contained in the Contractor's original tender shall be followed or where the same may not apply, valuation shall be made in accordance with Clause No.15 hereof.

**33. DETERMINATION OF CONTRACT DUE TO ABANDONMENT OR REDUCTION IN SCOPE OF WORK:**

33.1 If at any time after the acceptance of the tender, the Employer shall for any reasons whatsoever not require the whole or any part of the works to be carried out, the CE shall give notice in writing to the Contractor who shall have no claim to any payment of compensation or otherwise whatsoever on account of any profit or advantage which he might have derived from the Execution of the whole of the works.

The Contractor shall be paid at contract rates for the full amount of work executed and in addition:

- a. The cost at site of all surplus approved materials collected for incorporation in the work, which the Contractor does not wish to retain and which shall thereafter become the property of the Employer.
- b. Where the Contractor desires to retain the surplus of approved materials (excepting materials supplied by the Employer or obtained in Employer's name, which shall, in any case, be returned to the Employer) the cost of handling and cartage charges for removal from the site to a reasonable distance not exceeding 25 kms.
- c. If upon the determination of the Contract under this condition, the Contractor is of the opinion that he has suffered hardship by reason of the operation of these conditions, he may refer the circumstances with full details to the Chief Engineer, who on being satisfied that such hardship exists or has existed, shall make such allowance, if any as in his opinion is reasonable, and his decision shall be final, conclusive and binding.

**34. DISPUTES TO BE FINALLY DETERMINED BY CHIEF ENGINEER:**

**34.1** The Instruction, Decision, Opinion, Direction, Certificate or Valuation of the CE with respect to all or any of the matters under Clause (2), (3), (5), (6), (9), (14), (15), (18), (23), (27), (30), (31) and (33) hereof (which matters are herein referred to as EXCEPTED MATTERS) shall be final and conclusive and binding on the parties hereto and shall be without appeal. Any other Decision, Opinion, Direction, Certificate or Valuation of the CE or any refusal of the CE to give any of the same shall be subject to the right of Arbitration and review as given under Clause No.36.

**35. SECURITY DEPOSIT AND PERFORMANCE GUARANTEE:**

**35.1** Amount towards Security deposit shall be calculated as per details given under Serial No.9 of "APPENDIX TO CONDITIONS OF CONTRACT" in the tender. Security Deposit can be either in Cash or in the form of Bank Guarantee.

In case of cash option, the EMD shall be retained as part of Security Deposit and balance Security Deposit shall be accumulated through retentions from Running Account Bills at 7.5% (maximum) of gross amount of bill. If the total amount / 50% of EMD is submitted in the form of Bank Guarantee and the contractor wants to avail the cash option i.e. the deduction of security deposit from the bills, then the contractor has to deposit a demand draft /pay order in the name of Life Insurance Corporation of India payable at Patna amounting to the total amount / 50% of EMD in lieu of Bank guarantee submitted towards EMD. Once this amount is deposited the contractor can avail cash option for security deposit and the bank guarantee submitted towards EMD shall be returned.

In case of Bank Guarantee option, the Contractor shall furnish one Bank Guarantee for full amount of Security deposit valid till end of defects liability period OR, two Bank Guarantees of like amounts each equal to half the Security deposit; one valid till virtual completion and the other till end of defects liability period.

**35.2** Performance Guarantee under 9(b) of "Appendix to Conditions of Contract" shall be only in the form of Bank Guarantee valid up to scheduled date of completion.

**35.3** The Bank Guarantee/s shall be from any Nationalized / Scheduled Bank preferably at place of work site or Zonal Headquarter of LIC within whose jurisdiction the work falls or where a Branch/Division of the Corporation exists.

**35.4** Bank Guarantee/s (BGs) against Security Deposit (SD) and Performance Guarantee (PG) shall be executed as per the specimen pro-forma at Annexure B and C. Bank guarantee/s against Security Deposit and Performance guarantee shall be submitted within 21 (twenty one) days from the date of acceptance letter.

- 35.5 In case of failure by the contractor to furnish the Bank Guarantee against Performance Guarantee as per Cl.35.2 by the stipulated date or extended date if any, Employer shall without prejudice to any other right or remedy available in law, be at liberty to cancel the tender and forfeit the 50% Earnest Money absolutely.
- 35.6 50% of the Security Deposit (cash option) shall be refunded after the certificate of virtual completion is issued to the contractor & provided that the employer has no claim for forfeiture of part or whole of the said deposit.
- 35.7 Balance 50% of Security deposit will be refunded to the contractor after the satisfactory completion of the defects liability period, subject to deductions for any appropriations thereof required to be made by the employer as per the conditions of contract.
- 35.8 If one Bank Guarantee in lieu of total Security Deposit is furnished, the same will be released only after the successful completion of Defects Liability period subject to any appropriations as aforesaid.
- 35.9 If two Bank Guarantees in lieu of Security deposit are furnished, the First Bank Guarantee will be released after the certificate of Virtual completion is issued to the contractor and second shall be released after the satisfactory completion of Defects Liability Period subject to any appropriations as aforesaid.
- 35.10 Bank Guarantees towards Performance Guarantees (where applicable) shall be released after the virtual completion is issued.
- 35.11 Contractor shall keep the Security Deposit and Performance Guarantee, where applicable, replenished to its full value whenever any recovery or appropriation there from occurs. The employer reserves the right to do so from any money(s) due to the contractor laying with them.
- 35.12 The Contractor should note that no interest will be allowed on any part of the Security deposit.
- 35.13 No deductions will be effected from the bills when the total security deposit is paid in the form of Bank Guarantee(s) and the E.M.D shall be refunded after acceptance of Bank Guarantee(s).
- 35.14 In the event of failure by the contractor to submit Bank Guarantee(s) by the specified / extended date, recovery of Security deposit shall be effected from the R.A Bills. However, where the contractor fails to furnish Bank Guarantee against Performance Guarantee the matter shall be dealt with as per Cl. 35.5 above.
- 35.15 In all cases of Bank Guarantees, there shall be further provision of claim period of 6 months. If the contract period gets extended for any reason whatsoever, the contractor shall obtain the required extensions to the Bank Guarantee(s).

**36. SETTLEMENT OF DISPUTES, ARBITRATION:**

- 36.1 All Disputes and Differences of any kind whatsoever arising out of or in connection with the Contract or the carrying out of work (whether during the progress of the work or after its completion and whether before or after determination, abandonment or breach of contract) shall be referred to a Standing Committee consisting of 1. Retired High Court Judge and 2. Members from engineering fraternity retiring as senior Engineer from Government/ Government Undertaking. The Committee will be constituted by the Chairman, LIC of India.
- 36.2 The claims arising out of the Contract will be placed before the Committee once in a quarter and decision will be conveyed to both the contractually agreed parties.
- 36.3 Either of the Party on being dis-satisfied with the decision may approach to a Three Member Arbitral Tribunal, one each will be appointed by Either Party and 2 appointed Arbitrators will appoint 3rd Arbitrator who will act as Presiding Arbitrator.
- 36.4 Executive Director (Engg.) will appoint the Arbitrator on behalf of LIC of India. The Arbitration shall be conducted in accordance with Arbitration and Reconciliation Act 1996 as amended by the Arbitration and Reconciliation (Amendment) Act 2015 (3 of 2016) and any other amendment thereafter if any.
- 36.5. The Contractually Agreed Parties hereby also agree that the Arbitration under this clause shall be a Condition Precedent to any Right of Action in Law of Court under the Contract.

**37. LUMP SUM ADVANCE/MOBILISATION ADVANCE (APPLICABLE TO CONTRACT COSTING Rs.25 LAKHS AND ABOVE)**

- 37.1 Loan will be available if required by the Contractor, and may be given as under on submission of application by him subject to other conditions being fulfilled.
- 37.2 The mobilization advance limited to 10% in two installments (5%+5%) of contract accepted amount with simple interest at the rate of 10% (ten percent) can be sanctioned to the contractors on specific request as per terms of the contract. The advance shall be utilized by the Contractor for the purpose of this Contract only and for no other purpose.
- 37.3 The mobilization advance shall be released only after obtaining a Bank Guarantee bond as per

EAST CENTRAL ZONAL OFFICE, PATNA

Performa at Annexure 'C' from any Nationalized or Scheduled Bank preferably at Patna or where a Branch/Division of LIC of India exists for the amount of advance to be released and valid for the contract period. This shall be kept renewed from time to time to cover the balance amount and likely period to complete recovery together with interest. The advance should be released in not less than two installments (5%+5%). The interest on advance shall be calculated from the date of payment to the date of recovery; both days inclusive. It shall be ensured that at any point of time the Bank guarantee is available for the amount of outstanding advance.

- 37.4 The amount of loan which may be given to the Contractor shall be at the sole discretion of the CE and may be in one or more installments.
- 37.5 The recovery of the mobilization/Lump sum advance should be commenced after 10% of work is completed and the entire amount together with interest shall be recovered by the time 80% of work is completed. Provided that if at any time the Contractor fails to execute the Contract to the satisfaction of the Employer for any reason whatsoever, the Employer shall be entitled to recall forthwith the entire amount so advanced with interest and/or recover the whole/balance amount as the case may be, from the bill if any, payable to the Contractor or by enforcing the Bank Guarantee.
- 37.6 Whenever extension of time is granted to the Contractors for the completion of the project and where the loan is not fully recovered, Contractor shall furnish fresh Bank Guarantee for extended period of Contract for the outstanding loan amount together with specified simple interest at the rate of 10% for the remaining period.
- 37.7 Whenever the full amount of loan plus interest has been fully recovered, the Bank Guarantee shall be released.

## **GENERAL INSTRUCTIONS TO CONTRACTORS**

### **1. DRAWINGS:**

- 1.1 Drawings shall be kept open for inspection at places as mentioned in the letter to the contractor from the Chief Engineer. Drawings generally include the site plan, floor plans, elevations and sections of the proposed work.

### **2. INSPECTION OF SITE:**

- 2.1 The Tenderer shall visit and examine the site of work and satisfy himself as to the nature of the existing roads or other means of communication, the character of the soil and of the excavations, the correct dimensions of the work and facilities for obtaining materials and shall obtain generally his own information on all matters affecting the execution of the work. No extra charge made, in consequence of any misunderstanding or incorrect information on any of these points or on the grounds of insufficient description will be allowed. All expenses incurred by the Tenderer in connection with obtaining information for submitting this tender including his visits to site and efforts in compiling the Tender shall be borne by the Tenderer and no claims for reimbursement thereof shall be entertained.

### **3. WHOLE WORK TO BE COMPLETED IN THE SPECIFIED COMPLETION PERIOD:**

- 3.1 The whole work is to be completed within the completion period stated in the Appendix to Conditions of Contract or the extended date of completion, if any. The Contractor will be required if necessary, to work overtime to complete the work by the stipulated date. No extra will be allowed on the Contract sum for such overtime work.

### **4. TIME AND PROGRESS CHART:**

- 4.1 A time and Progress Chart is attached to this Contract for guidance. The Contractor shall submit a time and progress chart (**CPM/PERT/Quantified Bar Chart**) fitted within the specified overall period of completion (as stated in Appendix to Conditions of Contract) within **10 (Ten)** days of the communication of letter of intent, to the Corporation's Engineer. In case the Contractor does not come forward for any change in the Time and Progress Chart as provided in the General Instruction to the Contractors, it shall be presumed that the Time and Progress Chart is accepted in full in letter and spirit to maintain the pace of the progress of the Work.
- 4.2 Ancillary work should be so started that all such work is completed before the specified overall contractual period of completion.
- 4.3 The Contractor shall assume full responsibility for any delay in delivery of materials by Merchants or nominated Sub-Contractors not having completed the work in accordance with the Time and

EAST CENTRAL ZONAL OFFICE, PATNA

Progress Chart. Such excuses shall not form any criterion for extension of time, or any claims by the Contractor.

- 4.4 Any failure on the part of the contractor to adhere to the starting and completion date of individual items mentioned in the chart shall entail application of the liquidated clause on whole or part at the discretion of the Chief Engineer, notwithstanding the overall period of completion stated in the appendix to the conditions of contract.

**5. BENCHES:**

- 5.1 The Contractor is to construct and maintain proper benches to indicate the inter-section of all main walls in order that the lines and levels may be accurately checked at all times. The Contractor shall provide suitable stones with flat tops and build the same in concrete for temporary or permanent benchmarks. All the pegs for setting out the work and fixing the necessary levels required for the execution thereof shall, if desired by the Corporation's Engineer likewise, be built in masonry at such places and in such a manner as the Corporation's Engineer may determine. Contractors' rates shall cover for these factors.

**6. DRAWINGS ON SITE:**

- 6.1 The Drawings maintained on the site are to be carefully mounted on boards of appropriate size and covered with a coat of approved transparent varnish or laminated at the cost of the Contractor. They are to be protected from the ravages of termites, ants, silver fish and other insects.

**7. ORDER OF WORK:**

- 7.1 The Chief Engineer reserves the right to fix the order in which the various items of work involved in this Contract is to be executed and Contractor shall comply with the same. There shall be no extra claims on account of this.

**8. WORKMANSHIP:**

- 8.1 The Work calls for a high standard of workmanship combined with speed.

**9. REJECTED WORKMANSHIP OR MATERIALS:**

- 9.1 Any workmanship, or materials not complying with the specific requirements or approved samples, or which have been damaged, contaminated or deteriorated, must be removed immediately from the site and replaced at the Contractor's expense as directed.

EAST CENTRAL ZONAL OFFICE, PATNA

**10. QUOTED RATES:**

**10.1** The rate is percentage tender.

**11. WATCHING AND LIGHTING:**

**11.1** The Contractor from the time of being placed in possession of the site must allow for watching, lighting and protecting the work, the site and surrounding, properly by day and night on all days including Sundays or other holidays, at his own cost.

**12. WATER:**

**12.1** The rates quoted by the Contractors shall include for providing all water required for the work including that required by special tradesmen and Sub-Contractors and pay all charges required by Local Municipal or other Authorities. Water must be clean, fresh, pure and free from earth, vegetable or organic matters, acid or alkaline substance in solution or suspension. The Contractors shall make their own arrangements for water supply. If supply from the Municipality or other local bodies be inadequate, the Contractor should provide tube well or wells or open well at his own cost. The Contractors must execute any temporary plumbing and pay all fees and charges. All health regulations in force shall be strictly observed by the Contractor and pay all necessary charges.

**13. ELECTRICITY:**

**13.1** The Contractor shall arrange with the concerned Electricity Supply Authorities for a temporary meter and supply to the site and shall provide all temporary wiring, power and lighting points for the whole of the works and clear away when no longer required. He shall pay all charges for the same and for electricity consumed, including that consumed by Sub-Contractors. **The Contractor should submit disconnection & no dues certificate from the supplying authority along with his final bill.**

**14. OFFICE FOR CORPORATION'S ENGINEER ON SITE:**

**14.1** The Contractor shall at his cost, provide a separate office (of suitable size) for the Corporation's Engineer/s on site with writing tables, chairs, electric lights and fans, drinking water arrangements, etc. as directed by the Executive Engineer and clear away at completion of work and make good all work disturbed and pay all charges. The Contractor shall also provide facilities for having the Corporation Engineer's office cleaned every day and kept in good and hygienic condition.

**15. OFFICE ACCOMMODATION FOR CONTRACTOR'S STAFF :**

EAST CENTRAL ZONAL OFFICE, PATNA

- 15.1 The Contractor shall, at his cost, provide, fit-up and maintain in an approved position proper office accommodation for his representative and staff, which offices shall be open at all reasonable hours to receive instructions, notices or communications and clear away on completion and make good all work disturbed.

**16. SECURITY AND PROTECTION:**

- 16.1 The Contractor shall at his cost, provide any necessary temporary enclosures, gates, entrances, etc. for the protection of the work and materials and for altering and adapting same as may be required and removing at completion of the works and making good all works disturbed.
- 16.2 During inclement weather, the Contractor shall suspend concreting or plastering for such time as the Corporation's Engineer may direct and shall protect such work in course of execution from damage by approved measures.
- 16.3 Should the work be suspended by reason of rain, strike, lock-outs or any other cause, the Contractor shall at his cost take all precautions necessary for the protection of the work and shall make good any damage arising from any of these causes.
- 16.4 The Contractor shall at his expense cover-up and protect from injury from any cause, all new work and supply all temporary doors protection to windows, and any other requisite protection for the whole work executed, whether by himself or special tradesmen of Sub-Contractors and any damage caused must be made good by the Contractor at his own expense.
- 16.5 All fences, trees, shrubs, grasses, lawn and other surfaces around the buildings or approaches thereto, which are required to be maintained are to be kept free from damage due to operations in connection with the work, at Contractor's expense.
- 16.6 The Contractor shall, at his expense, protect all projecting sills, jambs, copings, stone or concrete treads and mouldings and all concrete steps, wood work and joinery and the like from injury during the progress of the work.
- 16.7 The Contractor shall at his cost, protect joinery and make good all damages to the same from any cause whatsoever during the performance of the Contract and leave perfect to the satisfaction of the CE at completion. Before giving possession, the Contractor must see that all doors, windows and ventilation etc. work easily and shall make all necessary adjustments for such smooth working.

**17. SANITATION:**

**17.1** The Contractor shall at his cost provide adequate latrine facilities and keep the same in a clean and hygienic condition to the satisfaction of the Public Health Authorities and shall cause such latrine and night soil to be cleared away whenever necessary and shall make good all works disturbed by these conveniences.

**18. MINIMUM WAGES ACT:**

**18.1** The Contractor shall pay rates of wages and observe hours of work and conditions of employment to existing rules under Minimum Wages Act. Further, it shall be Contractor's responsibility to ensure that he pays his workmen wages, which are not lower than the minimum prescribed by the Union Government and State Government in which area this Contract, is being operated.

**19. SHEDS FOR MATERIALS:**

**19.1** The Contractor shall at his cost provide and maintain proper approved sheds for the storage and protection of materials etc. and other work that may be executed on the site including the tools and materials of Sub-Contractors and remove on completion. Sheds for storage of Cement are to have floors raised from the ground.

**20. TEMPORARY ROADS:**

**20.1** The Contractor shall, at his expense, provide such temporary roads on the site as may be necessary for the proper performance of the Contract and for his own convenience but not otherwise. Upon completion, such roads shall be broken up and levelled where so required by the Drawings at Contractor's expense unless the CE shall otherwise direct.

**21. OBJECTS OF VALUE AND ANTIQUITY FOUND ON SITE:**

**21.1** All objects of value or antiquity found on the site shall remain the property of the Employer and such findings shall be immediately reported to the Chief Engineer.

**22. WORKS AND SITE TO BE KEPT AND DELIVERED UP CLEAN:**

**22.1** All shavings, cuttings and other rubbish as it accumulates from time to time during the progress of the work and at completion, including that of Sub-Contractor and special tradesman to be cleared and carted away. All rejected materials shall be removed. Contractor's quoted rates shall allow for these factors.

**23. USEFUL EXCAVATED MATERIALS:**

- 23.1** Any sand, gravel, moorum or rock taken from excavation will remain the property of the Employer and in the event of it not being allowed to use in the work, the Employer reserves the right to dispose it off in any way he wishes or to direct the Contractor to cart it away as ordinary materials.
- 23.2** Should suitable sand or gravel or moorum or rock be found in the excavations and the Contractor be allowed to use the same in the work, in place of materials to be brought by him from outside he will be required to pay the Employer the full market value of the same.

**24. SIGN BOARD AND HOARDINGS:**

- 24.1** The Contractor shall not affix or place any placards or advertisement of any description or permit the same to be affixed or placed in or upon any hoarding, gantry, buildings or structure other than that approved by the Chief Engineer.

**25. SCIENTIFIC AND MEASURING INSTRUMENTS:**

- 25.1** Theodolite, levelling instruments, prismatic compass/chain, steel and metallic tapes and all other surveying instruments found necessary on the works, shall be provided by the Contractor at his expense for the due performance of this Contract as instructed by the Corporation's Engineer.

**26. TOOLS FOR MASONS:**

- 26.1** Every bricklayer or plasterer on the work shall be provided with suitable level, battens, trowels, wooden floats and breaking hammers for cutting bricks and templates, to enable him to carry out the work in a neat and workman like manner and each gang of brick layers or plasterers not exceeding six in number shall be provided with a suitable measuring rule, a plumb bob, a spirit level and a square in addition to the above mentioned, all to be to the approval of the Site Engineer.

**27. CONTRACTOR'S MISTRIES AND SUPERVISORS:**

- 27.1** The Contractor's Masson and the Supervisors on the works shall carry with them a suitable measuring rule, a measuring tape, a spirit level, a plumb bob and a square and shall check the work of the bricklayer, plasterers, and carpenters and joiners to see that the work is being done according to the Drawings and Specifications. The Corporation's Engineer/Supervising Staff will use any and all measuring instruments or tools belonging to the Contractor as he chooses, while checking the work executed or being executed on the works.

**28. NO OVERLOADING OF SLABS:**

- 28.1** Floors of buildings under construction shall not be loaded by stacks of materials during construction without the prior approval of Corporation's Engineer. It is important that no load comes on the reinforced concrete floors until they are at least three weeks old and at no time must the load placed upon them exceed the load for which they are designed.

**29. ALTERNATIVE ITEMS:**

- 29.1** In regard to alternative items, if any, specified in the Schedule of Quantities, Contractor should note that the Employer reserves the right to order the Principal item or its alternatives at the CE's discretion.

**30. ATTENDANCE ON SUB-CONTRACTORS:**

- 30.1** Co-ordination: The Contractor shall be responsible for the co-ordination of all the work including that of Sub-Contractors, for arranging runs of all services and working to the requirements and layout of the specialist trades, in all matters necessary for the complete execution of the work.
- 30.2** Rates quoted by the Contractor shall be inclusive of all attendance on Sub-Contractors or other Contractors nominated by the Employer. Contractor must allow for provision of the use of his scaffolding to Sub-Contractors and for its retention until such time all relevant Sub-Contract works are completed.
- 30.3** The Contractor shall accept liability for and bear the cost of the supply of all necessary water, electricity, lighting, watching etc. for the Sub-Contractors work.
- 30.4** The Contractor must allow in his rates for making good any holes and chases left by the Sub-Contractors or other Contractors nominated by the Employer before the Builder's Work is completed and handed over
- 30.5** The Contractors shall, at all times, give access to workmen employed by the local or other authorities or any men directly employed on the buildings and to provide such parties with proper, sufficient, and if required, special scaffolding, hoists and ladders and provide them with water and lighting, and leave or make any holes, grooves etc. in  
any work directed by the Chief Engineer, as may be required, to enable such workmen to lay or fix pipes, electric wiring, special fittings etc. Contractor's quoted rates shall allow for these factors.

**31. OCCUPATION BY EMPLOYER:**

**31.1** The Employer reserves the right to occupy the works by sections as completed, as may be considered by the Chief Engineer both practicable and reasonable and without hindrance to the Contractor's progress.

**32. TAXES, DUTIES, LEVIES AND DEDUCTION AT SOURCE:**

**32.1** The Contractors shall be responsible to pay all statutory levies/taxes imposed by the State and Central Government from time to time. It is deemed that the rates quoted by the contractor for each item of works includes all applicable taxes except GST on works contract which shall be paid by LIC as applicable from time-to-time as per notification of Government of India.

**32.2** Deduction at source of Income tax, all other statutory taxes as applicable and labour cess shall be made by LIC of India as per statutory provisions prevailing from time to time, from the running account/ final bill and remitted to the concerned taxation authorities / State Government on behalf of the contractor.

**32.3** The contractor shall mention the following LIC of India GSTIN Number according to State of work site in their bill.

|                            |                   |
|----------------------------|-------------------|
| FOR BIHAR GSTIN NUMBER     | : 10AAACL0582H2Z0 |
| FOR JHARKHAND GSTIN NUMBER | : 20AAACL0582H1Z0 |
| FOR ODISHA GSTIN NUMBER    | : 21AAACL0582H1ZY |

**32.4** The vendor needs to display the invoice on the GST portal and remit the tax to the Govt. within specified period.

**32.5** The measurement **sheets (Excel format)** along with the abstract are to be checked, corrected and accepted by the vendor and then only invoice with zero correction will be raised and uploaded by the vendor on GST portal.

**32.6** The vendor should quote their rate considering all taxes/duties/levies/ labour welfare cess etc. which are not subsumed in GST but excluding GST on works contract as applicable which will be paid extra at the rate prevailing at the time of billing. It is also advised to quote the rate after considering the input tax credit advantage and adjusting / deducting the same in the quoted rate/amount.

**32.7** GST on works contract will be paid extra along with Bill payment as per applicable rate of GST at the time of billing.

**ANNEXURE –‘A’**

**PROFORMA FOR ARTICLES OF AGREEMENT**

ARTICLES OF AGREEMENT made at.....this.....day of .....20..... between THE LIFE INSURANCE CORPORATION OF INDIA, a body corporate constituted and established by the Life Insurance Corporation Act, 1956 (Act 31 of 1956) and having its Central Office at "Yogakshema", Jeevan Bima Marg, Mumbai and its Zonal Office at ..... hereinafter called the Employer (which expression shall include its successors and assignees wherever context or meaning shall so require or permit) of the one part and M/s .....( hereinafter called **"The Contractor"** ) of the other part.

WHEREAS the Employer is desirous of constructing the.....

and has prepared drawings and specifications and the Schedule of Quantities which have been signed by or on behalf of the parties hereto.

AND WHEREAS the Contractor has agreed to execute upon and subject to the conditions and instructions set forth herein ( hereinafter referred to as **"the said Conditions"**) the works shown upon the said drawings and /or described in the said Specifications and included in the said Abstract Schedule of Quantities at the item rates therein set forth amounting to the contract sum of Rs..... hereinafter referred to as **"the said contract Amount"**.

**NOW IT IS HEREBY AGREED AS FOLLOWS:**

1. In consideration of the said Contract Amount to be paid at the times and in the manner set forth in the said conditions, the contractor shall upon and subject to the said Conditions execute and complete the works shown upon the said Drawings and described in the Specifications and/or the priced Schedule of Quantities.
2. The Employer shall pay the contractor the said Contract Amount or such other sum as shall become payable for the items and in the manner hereinafter specified in the said conditions.
3. The said Conditions and Appendices thereto shall be read and construed as forming part of this Agreement, and the parties hereto shall respectively abide by and submit themselves to the conditions and perform the Agreement in their part respectively in such conditions contained.
4. All disputes arising out of or in any way concerned with this Agreement shall be deemed to have arisen in \_\_\_\_\_ and only the Courts in \_\_\_\_\_ shall have jurisdiction to determine the same.
5. The contract comprises :-
  - i) Tender Documents Serial Pages.....
  - ii) Subsequent Correspondence Serial Pages.....

EAST CENTRAL ZONAL OFFICE, PATNA

iii) Architectural Drawings Serial Pages .....

6. Only ( ) alterations have been made in these documents and as evidence that these alterations were made before the execution of Contract Agreement, they have been initialed by the contractor and.....  
.....Engineer, ..... Zone, Life Insurance Corporation of India  
..... The said officer is hereby authorised to sign and initial on the Employer's behalf, the documents forming part of this contract.

7. IN WITNESS WHEREOF THE Official seal of the LIFE INSURANCE CORPORATION OF INDIA, ..... ZONE, was thereto affixed and signed on its behalf by the Chief Engineer and by ..... on behalf of the Contractor/s on the dates respectively mentioned against their signatures in the presence of the witnesses whose signatures are also appended.

In the presence of

CHIEF ENGINEER

1. Signature : .....

Name : .....

Address : .....  
.....

FOR AND ON BEHALF OF THE  
LIFE INSURANCE CORPORATION  
OF INDIA

Date : .....

2. Signature : .....

Name : .....

Address : .....  
.....

In the presence of .....

1. Signature : .....

Name : .....

Address : .....  
.....

FOR AND ON BEHALF OF THE  
CONTRACTOR  
M/S .....

Date : .....

2. Signature : .....

Name : .....

Address : .....

ANNEXURE – 'B'

**LIFE INSURANCE CORPORATION OF INDIA**

(Refer Clause No. 35 of Conditions of Contract)

**FORM OF BANK GUARANTEE IN LIEU OF SECURITY DEPOSIT**

**IN INDIVIDUAL CONTRACTS**

To

THE LIFE INSURANCE CORPORATION OF INDIA

In consideration of the Life Insurance Corporation of India having its \_\_\_\_\_ Zonal Office at \_\_\_\_\_ in the State of \_\_\_\_\_ (hereinafter called '**the Corporation**') which expression shall unless repugnant to the subject or context include its successors and assignees) having agreed under terms and conditions of contract (vide its acceptance letter No. \_\_\_\_\_ dated \_\_\_\_\_ ) made between \_\_\_\_\_ (hereinafter called the said Contractor) and the Corporation in connection with \_\_\_\_\_ (hereinafter called '**the said contract**') to accept a Deed of Guarantee and Indemnity as herein provided for Rs. \_\_\_\_\_ from the \_\_\_\_\_ in lieu of the Security Deposit to be made by the contractor and/or in lieu of the deduction to be made from the Contractor's bills, for the due fulfillment by the said contractor of the terms and conditions contained in the said contract, we the \_\_\_\_\_ (hereinafter referred to as '**the said Bank**') and having our office at \_\_\_\_\_ do hereby undertake and agree to indemnify and keep indemnified the Corporation from time to time to the extent of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) against any loss or damage, costs, charges and expenses caused to or suffered by or that may be caused to or suffered by the Corporation by reason of any breach or breaches by the said contractor in respect of the said contract or of any of the terms and conditions contained in the said contract, or in respect of all its claims for money and / or material found due and recoverable from the said contractor and to unconditionally pay the amount claimed as such by the Corporation on demand and without demur to the extent aforesaid.

2. We, the said Bank further agree that the Corporation shall be the sole judge of and as to whether the said contractor has committed any breach or breaches of any of the terms and conditions of the said contract and the extent of loss, damage, costs, charges and expenses caused to or suffered by or that may be caused to or suffered by the Corporation from time to time on account thereof and the decision of the Corporation in this respect shall be final and binding on us.

EAST CENTRAL ZONAL OFFICE, PATNA

3. The Corporation shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee or Indemnity from time to time to vary any of the terms and conditions of the said contract or to extend time of performance by the said contractor, or to postpone for any time and from time to time any of the powers exercisable by it against the said contractor and either to enforce or forbear from enforcing any of the terms and conditions governing the said Contract or securities available to the Corporation and the said Bank shall not be released from its liability under these presents by any exercise by the Corporation of the liberty with reference to the matters aforesaid or by reason of time being given to the said contractor or any other forbearance, act or omission on the part of the Corporation or any indulgence by the Corporation to the said contractor or of any other matter or thing whatsoever, which under the law relating to sureties would but for this provision have the effect of so releasing the Bank from its liability.

4. It shall not be necessary for the Corporation to proceed against the contractor before proceeding against the Bank and the Guarantee and Indemnity herein contained shall be enforceable against the said Bank, notwithstanding any security which the corporation may have obtained or obtain from the contractor shall at the time when proceedings are taken against the Bank hereunder be outstanding or unrealized.

5. Notwithstanding anything contained in any of the foregoing clauses the liability of the Bank under this Guarantee shall not exceed Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only). The guarantee shall remain in force till \_\_\_\_\_. If any extension of time be granted to the contractor, we undertake to extend the guarantee with the consent of the contractor. Unless a claim or demand under this guarantee is made or presented to the Bank within six months from the expiry date, all the rights of the Corporation under this Guarantee shall cease and the Bank shall be released and discharged from all liability hereunder.

6. We, the said bank lastly undertake not to revoke this guarantee and indemnity during its currency except with the previous consent of the Corporation in writing and agree that any change in the constitution of the said contractor or the said Bank shall not discharge our liability hereunder.

For and on behalf of the Bank

(Name and Designation)

The above Guarantee is accepted by the  
LIFE INSURANCE CORPORATION OF INDIA.

For and on behalf of the LIC of India

(Name and Designation)

Contractor

EAST CENTRAL ZONAL OFFICE, PATNA

Dated:

**Note No.1 \* : FILL IN AS APPLICABLE**

**A) For Proprietary concerns:-**

Shri \_\_\_\_\_ son of \_\_\_\_\_ resident of \_\_\_\_\_ carrying on business under the name and style of \_\_\_\_\_ at \_\_\_\_\_ (hereinafter called '**the said contractor**' which expression shall unless the context requires otherwise include his heirs, executors, administrators and legal representative).

**OR**

**B) For Partnership concerns:-**

1. Shri \_\_\_\_\_  
son of \_\_\_\_\_  
resident of \_\_\_\_\_
2. Shri \_\_\_\_\_  
son of \_\_\_\_\_  
resident of \_\_\_\_\_

\_\_\_\_\_ carrying on business in partnership under the name and style of \_\_\_\_\_ of \_\_\_\_\_ at \_\_\_\_\_ (hereinafter collectively called '**the contractor**' which expression shall unless the context requires otherwise include each of them and their respective heirs, executors, administrators and legal representatives)

**OR**

**C) For companies :-**

M/S / Shri \_\_\_\_\_ a company under the Companies Act 1956 and having its registered office at \_\_\_\_\_ in the state of \_\_\_\_\_ (hereinafter called '**the said contractor**' which expression shall unless the context requires otherwise include its successors and assignees).

**Note No.2:**

**\*\* Please fill in the name and address of Bank.**

**ANNEXURE – 'D'**

**LIFE INSURANCE CORPORATION OF INDIA**

(Refer clause 37 of Conditions of Contract)

**FORM OF BANK GUARANTEE TO SECURE A LUMP SUM ADVANCE**

To

THE LIFE INSURANCE CORPORATION OF INDIA

In consideration of the Life Insurance Corporation of India having its \_\_\_\_\_ Zonal Office at \_\_\_\_\_ in the State of \_\_\_\_\_ (hereinafter called 'The Corporation' which expression shall unless repugnant to the subject or context include its successors and assignees) having agreed under the terms and conditions of contract vide its acceptance letter No. \_\_\_\_\_ dated \_\_\_\_\_ made between \_\_\_\_\_ \*

\_\_\_\_\_ hereinafter called the said Contractor and the Corporation in connection with \_\_\_\_\_ (hereinafter called the said 'contract'), to make at the request of the contractor a lump sum advance of Rs. \_\_\_\_\_ for utilizing it for the purpose of contract on his furnishing a guarantee acceptable to the Corporation, we the \_\_\_\_\_ \*\* Bank (hereinafter referred to as 'the said Bank') a company under the companies Act, 1956 and having our registered office at \_\_\_\_\_ do hereby guarantee the due recovery by the Corporation of the said advance together with interest and costs thereon according to the terms and conditions of the said contract. If the said contractor fails to utilize the said advance for the purpose of the contract and/or the said advance together with interest thereon as aforesaid is not fully recovered by the Corporation, we the said Bank hereby unconditionally and irrevocably undertake to pay to the Corporation on demand and without demur to the extent of the sum of Rs. \_\_\_\_\_.

1. We, the said Bank further agree that the Corporation shall be the sole judge of and as to whether the said contractor has not utilized the said advance or any part thereof for the purpose of the said contract and the extent of loss or damage caused to or suffered by The Corporation on account of the said advance together with interest and costs thereon not being recovered in full and the decision of the Corporation in this respect, shall be final and binding on us.

EAST CENTRAL ZONAL OFFICE, PATNA

2. The Corporation shall have the fullest liberty without affecting in anyway the liability of the Bank under this Guarantee or Indemnity, from time to time to vary any of the terms and conditions of the said contract or the advance or to extend time of performance by the said contractor or to postpone for any time and from time to time any of the powers exercisable by it against the said contractor and either to enforce or forbear from enforcing any of the terms and conditions governing the said contract or the advance or securities available to the Corporation and the said Bank shall not be released from its liability under these presents by any exercise by the Corporation of the liberty with reference to the matters aforesaid or by reason of time being given to the said contractor or any other forbearance, act or omission on the part of the Corporation or any indulgence by the Corporation to the said contractor or of any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of so releasing the Bank from its such liability.
3. It shall not be necessary for the Corporation to proceed against the contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank notwithstanding any security which the Corporation may have obtained or obtain from the contractor shall at the time when proceedings are taken against the Bank hereunder be outstanding or unrealized.
4. Notwithstanding anything to the contrary hereinbefore contained the Bank's liability hereunder shall not exceed Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ ) in the aggregate. This Guarantee shall remain in force till the \_\_\_\_\_ day of the year 20...and the Bank's liability hereunder will cease to be operative unless any claim is lodged with the Bank within 6 (six) months thereafter.
5. We, the said Bank lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the Corporation in writing and agree that any change in the constitution of the said contractor or the said Bank shall not discharge our liability hereunder.

For and on behalf of the Bank.

(Name and Designation)

The above Guarantee is accepted by the Life Insurance Corporation of India.

For and on behalf of the

LIFE INSURANCE CORPORATION OF INDIA

(Name and Designation)

EAST CENTRAL ZONAL OFFICE, PATNA

Note No.1 \* : FILL IN AS APPLICABLE

**A) For Proprietary concerns:-**

Shri \_\_\_\_\_ son of \_\_\_\_\_ resident of \_\_\_\_\_  
\_\_\_\_\_ carrying on business under the name and style  
of \_\_\_\_\_ at \_\_\_\_\_ (hereinafter called  
'the said contractor' which expression shall unless the context requires otherwise include his heirs,  
executors, administrators and legal representative).

**OR**

**B) For Partnership concerns:-**

1. Shri \_\_\_\_\_  
son of \_\_\_\_\_  
resident of \_\_\_\_\_
2. Shri \_\_\_\_\_  
son of \_\_\_\_\_  
resident of \_\_\_\_\_

\_\_\_\_\_ carrying on business in partnership under the name and style of \_\_\_\_\_  
\_\_\_\_\_ at \_\_\_\_\_  
\_\_\_\_\_ (hereinafter collectively called 'the contractor' which  
expression shall unless the context requires otherwise include each of them and their respective heirs,  
executors, administrators and legal representatives)

**OR**

**C) For companies:-**

M/S / Shri \_\_\_\_\_ a company under the Companies Act 1956  
and having its registered office at \_\_\_\_\_ in the state of \_\_\_\_\_ (hereinafter  
called 'the said contractor' which expression shall unless the context requires otherwise include its  
successors and assignees).

**Note No.2 \*\* : Please fill in the name and address of Bank.**

**LETTER TO CONTRACTOR FROM CHIEF ENGINEER**

Ref.: ECZO/Engg./up gradation/Fire

Dated: 02.03.2022

To,

M/s-----

-----

-----

Dear Sir/Sirs,

**Reg: E- Tender for up gradation of existing fire fighting, fire alarm system and operation & maintenance of fire fighting and fire alarm system in ECZO, Jeevan Deep Building, Exhibition Road, Patna-800001.**

**A) Estimated Tender Amount : 20.80 Lac approx.**

- 1) We hereby publish the TENDER on e-Tendering Portal (Website) through <http://www.tenderwizard.com/lic> **Electronic Mode** hereinafter referred as **"e Tendering"**.
- 2) Please note that copy of above e-Tender can be downloaded from above portal (website) and should be mandatorily submitted in **Online Electronic Mode** hereinafter referred as **"Online Offer"**. The submission of Online offer duly Encrypted & Digitally Signed on above portal should be in prescribed Electronic Forms (Online) available on above portal for respective tender in Online Envelope(s) on or before **As per the Key Dates mentioned in the tender document and online portal for above tender.**
- 3) The bidders should submit the required Earnest Money Deposit Instrument of **Rs.10,500/- (Rupees ten thousand five hundred only)** and **Tender Cost of Rs2,000.00 (Rupees two thousand only) + 18% GST** through on line mode of payment i.e. NEFT/ RTGS etc., **(Details Given in the tender), as per the Key Dates** and the e-Tenders will be opened at **As per the Key Dates** in the presence of contractors or accredited representatives, who wish to attend the online Tender Opening process. The bidders can view the Tender Opening details through their respective Login IDs on the above mentioned e-Tender portal (Website). The Tenderer should ensure that their tender is

EAST CENTRAL ZONAL OFFICE, PATNA

received **Online Electronically** on or before the due date and time as specified in “Key Dates” in the Tender Document and above mentioned Portal (website). **Please note that above e-Tendering System is an automatically time locked system which will be locked immediately as soon as due date and time is over and will not accept any offer after that. So, the tenderers are strictly advised to do their process well before the due date and time to avoid any such instances.**

- 4) Instructions In regard to Submission of tenders on Electronic Tendering System (ETS) is attached in the Tender document. The tenderers are advised to carefully read the tender documents for understanding of e-Tendering System. The above instructions will supersedes all the terms & conditions mentioned for submission of tender in document.
- 5) The Life Insurance Corporation of India does not bind itself to accept the lowest or any tender and reserves the right to reject any or all tenders without assigning any reason thereof.

Yours Faithfully,

**CHIEF ENGINEER**

**LETTER FROM CONTRACTOR TO CHIEF ENGINEER**

To,

The Chief Engineer,  
Life Insurance Corporation of India,  
ECZO, Jeevan Deep Building,  
Engg. Deptt. (4th Floor),  
Exhibition Road, Patna-800001

Dear Sir,

**Reg: E- Tender for up gradation of existing fire fighting, fire alarm system and operation & maintenance of fire fighting and fire alarm system in ECZO, Jeevan Deep Building, Exhibition Road, Patna-800001.**

1. Having examined the Specifications, conditions of tender, form of Percentage rate contract, Schedule of Quantities relating to the above work of the tender and the drawings and having visited and examined the site of the proposed works and having inquired the requisite information relating thereto as affecting the tender invited by you on behalf of the Life Insurance Corporation of India, I/We, the undersigned hereby offer to execute, complete and maintain the proposed works on Percentage rate basis in strict accordance with the contract conditions and specifications for the sum as mentioned in the General Summary as may be ascertained in accordance with the said conditions.
2. I / We undertake to complete and deliver the whole of the work within a period as specified in Appendix to the Conditions of Contract from the date of issue of intimation from you that the tender has been accepted and upon receiving possession of the site. I/We shall be under the obligation to pay the sum of as stated in the Appendix to the Conditions of Contract for every day that the works shall remain incomplete, damages as compensation subject to the conditions of contract relating to an extension of time.
3. I/We Submit herewith my/our tender online with an Earnest money remittance of **Rs.10,500/-** and tender fee of **Rs.2,000/- + GST 18%** through appropriate format/ mode of payment as specified in the tender / NEFT / RTGS (Details Given in the tender), having UTR No ..... I/We, hereby agree that part of this sum shall be forfeited by the 'Life Insurance Corporation of India' in the event of my/ our tender being accepted and I/We fail to execute Contract when called upon to do so.

EAST CENTRAL ZONAL OFFICE, PATNA

4. In the event of the tender being accepted:

The E.M.D shall be retained as part of security deposit. The balance Security Deposit shall be remitted as per the "Appendix to the Conditions of Contract".

5. I / We note that the Earnest Money deposited by me/us would be refunded to me/us.
- a. On expiry of the validity of the tender or earlier at the discretion of Chief Engineer in case my/ our tender is not accepted.

Yours faithfully,

SIGNATURE OF THE CONTRACTOR

Name of the Partner of the Firm

Or

Name of person having Power of Attorney to sign the contract.

(Certified True Copy of the Power of Attorney should be attached).

.

**LIFE INSURANCE CORPORATION OF INDIA**  
**INSTRUCTIONS IN REGARD TO ONLINE SUBMISSION OF TENDERS**

**NOTE: Contractors are requested to note that non-compliance of the following instructions is liable to render their tenders non-bonafide.**

1. Address to which Demand draft for EMD and Tender Fee in a sealed envelope marked as EMD & tender fee for E-tender for Annual Maintenance Contract of Fire Alarm System, PA system and Fire Fighting System installed at Zonal office, Jeevan Deep Building, Exhibition Road, Patna-800001 has to be submitted is as below:

*The Chief Engineer  
LIC of India,  
ECZO, Jeevan Deep Building,  
Engineering Department (4<sup>th</sup> Floor)  
Exhibition Road, Patna-800001.*

A scanned copy of the Demand Draft is to be uploaded in the portal. In case of NEFT/RTGS Payment, the Receipt of NEFT/RTGS is to be uploaded on E-tender Portal. The Payment of EMD and Tender fee can be made together through EFT.

The **account details** for **NEFT/RTGS** transactions are as follows:

**i) Name of Account Holder: LIC of India-ZO, Patna**

**ii) Type of Account: Current Account**

**iii) 15 Digit Account No: 142010200012704**

**iv) Bank Name: Axis Bank**

**v) Bank address: Main Branch, Patna**

**vi) IFSC Code: UTIB00000142**

**2. Last date for submission of on-line tender: 17.03.2022 upto 15.00 hours**

3. Tenderers should ensure that their tenders are submitted electronically before in the date and time specified above.
4. Tenderer should fill in all the relevant information in prescribed templates/forms and put his Digital signature on the relevant places as required in the e-tendering System.
5. The Price Bid should be filled in as per the format given in the online e-Tender.
6. The Price Bid should be filled as follows :

Contractors should quote their item rates in figure in the portal.

7. No alterations or additions are to be made by the contractors of the text of the Schedule of these tender papers. Violation of this instruction entails rejections of the tender at the discretion of the Dy. Chief Engineer.
8. Any tender which proposes any alterations to any of the condition/s laid down or which proposes any other conditions of any description whatsoever is liable to be rejected at the discretion of the Dy. Chief Engineer.
9. Contractors are warned that Cash, or Encashable Cheque, or Bank or Insurance Guarantee, or Fixed Deposit receipt in lieu of the aforementioned form of Earnest Money remittance will not be accepted
10. Tenders containing errors are liable to be considered non-bonafide at the discretion of the Dy. Chief Engineer

Tenderer should note that tender should remain open for consideration for a minimum period of **THREE MONTHS** from the date fixed for the receipt of tenders.

11. The Contractor is required to check the numbers of the pages and should any page be found missing or in duplicate, or the figure or writing in district, he must inform the Chief Engineer at once and have the same rectified. Should the Contractor be in doubt about the precise meaning of any item or figure, for any reason may be decided upon before the date for the submission.
12. No liability whatsoever will be admitted nor claim allowed in respect of errors in the submitted tender due to missing / duplicate pages , indistinct writing or any other error in the tender document , which should have been rectified in the manner described above.
13. Registration of contractors on E-tendering Portal: All the Contractors intending to participate in the tenders processed online are required to get registered on the Electronic Tendering System on the Portal <https://www.tenderwizard.com/LIC> more details, please see the information on the Registration info link on the home page.
14. Obtaining a Digital Certificate:
  - i) The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. These Digital Certificates are issued by the Controller of Certifying Authorities, Government of India.

EAST CENTRAL ZONAL OFFICE, PATNA

ii) For DSC related issues please contact to our Help desk No. -080-40482000/121/133/140,  
Mobile no.9686115304/9686115323

Address: Tenderwizard Help Desk Centre

24, Sudha Complex, 03<sup>rd</sup> Stage,

04<sup>th</sup> Block, Basaveshwaranagara,

Bangalore-560079

15. The contractors may obtain Class-III digital certificate from any Certifying Authority or Sub-certifying Authority authorized by the Controller of Certifying Authorities or may obtain information and application format and documents required for the issue of digital Certificate from:
16. Bid for a particular tender may be submitted online using the digital certificate, which is used to encrypt the data and sign the hash during the stage of bid preparation & hash submission. In case, during the process of a particular tender, the user loses his digital certificate (be it due to virus attack, hardware problem, operating system or any other problem) he will not be able to submit the bid online. Hence, the users are advised to keep a back up of the certificate and also keep the copies at safe place under proper security (for it's use in case of emergencies).
17. If the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate/ power of attorney/ lawful authorization to that User. The firm has to authorize a specific individual through an authorization certificate signed by all partners to use the digital certificate as per Indian Information Technology Act 2000. Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm in Life Insurance Corporation of India, as per Information Technology Act 2000. The digital signature of this authorized user will be binding on the firm. 2.6 In case of any change in the authorization, it shall be the responsibility of management/ partners of the firm to inform the certifying authority about the change and to obtain the digital signatures of the new person / user on behalf of the firm / company. The procedure for application of a digital certificate however will remain the same for the new user.

18. The same procedure holds true for the authorized users in a private/ public limited company. In this case, the authorization certificate will have to be signed by the directors of the company. "
19. Set up of machine: In order to operate on the electronic tender management system, the user's machine is required to be set up. The machine must have running XP service Pack 3 or higher version of Windows like Vista or Window 7. Also need to install Mozilla Fire fox web browser and latest Version of Java. This can also be downloaded from the portal <https://www.tenderwizard.com/LIC>
20. Online Viewing of Detailed Notice Inviting Tenders: The contractors can view the detailed N.I.T and the time schedule (Key Dates) for all the tenders floated through the electronic tendering system on the portal <https://www.tenderwizard.com/LIC> For Tendering related issues please contact to Helpdesk No. 9686115304/9686115323.
21. Download of Tender Documents: The tender documents can be downloaded from the Electronic Tendering System through the Portal <https://www.tenderwizard.com/LIC>.
22. **Key Dates:** The contractors are strictly advised to follow dates and times as indicated in the Notice Inviting Tenders. The date and time will be binding on all contractors. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and the time of the stage as defined in the Notice Inviting Tenders.
23. Submission of bids will be preceded by submission of the digitally signed bid seal (Hash) as stated in the time schedule (Key Dates) of the Tender.
24. Generation of Super Hash: After the submission of Bids (Hash) by the Contractors, the bidding round will be closed and a digitally signed Super Hash will be generated by the authorized officers of Life Insurance Corporation of India. This is equivalent to sealing the tender box.
25. Submission of actual online bids: Contractors have to submit their encrypted bids online for which they generated the hash at the stage of hash generation & submission after the generation of Super Hash. The process is required to be completed within the date and time as stated in the Notice Inviting Tenders (Key Dates). The electronic bids of only those contractors who have submitted their bid seals (Hashes) within the stipulated time, as per the tender time schedule (Key Dates), will be accepted by the system. A contractor who does not submit his bid seal (Hash) within the stipulated time will not be allowed to submit his bid. Note: -Bidders participating in e-tendering shall check the validity of his/ her Digital signature Certificate before bidding in the Tenders floated online at e-tendering

EAST CENTRAL ZONAL OFFICE, PATNA

portal i.e. <https://eprocurement.synise.com/LIC> a) No alterations or additions are to be made by the tenderer to the text or the Schedule of these tender papers. Any tender which proposes any alterations to any of the condition/s laid down or which proposes any other conditions of any description whatsoever is liable to be rejected.

- 26.** The Life Insurance Corporation of India reserves the right to accept any tender or to accept tenders in part; to reject any or all tenders without assigning reasons thereof.

**Chief Engineer**

## APPENDIX TO CONDITIONS OF CONTRACT

**EARNEST MONEY DEPOSIT : Rs.10,500.00**

**VALIDITY OF TENDER RATE : 06 MONTHS**

| Sl. No. | Description                                                                                         | Remarks                                                                                                                                                                                                                |
|---------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Date of commencement                                                                                | 21 days from the from date of LOI OR the day on which contractor has taken over the site whichever is earlier.                                                                                                         |
| 2       | Date of completion                                                                                  | <b>03 months</b> from the date of commencement                                                                                                                                                                         |
| 3       | Liquidated damages                                                                                  | 0.5% per week subject to a maximum of 10% of accepted tender amount                                                                                                                                                    |
| 4       | Period of final measurement                                                                         | 90 (Ninety) days.                                                                                                                                                                                                      |
| 5       | Minimum value of work for interim certificate                                                       | 6.00 Lacs only                                                                                                                                                                                                         |
| 6       | Period of honouring interim certificate                                                             | 30 Days                                                                                                                                                                                                                |
| 7       | Period of honouring final certification.                                                            | 30 days from the date of submission of final measurement with details.                                                                                                                                                 |
| 8       | Defects Liability Period                                                                            | 01 years after Virtual Completion of work                                                                                                                                                                              |
| 9       | Security Deposit                                                                                    | 5 % of accepted tender amount                                                                                                                                                                                          |
| 10      | Insurance Policy                                                                                    | Contractor's All Risk Policy (CAR) of full contract value with rider for third Party insurance for amount insured not less than 7.5% of contract value and Workmen Compensation Policy for required number of workmen. |
| 11      | Recovery of Electricity and / or Water charges from Contractors bill <b>if used from LIC source</b> | 0.50% of the Gross value of work done.                                                                                                                                                                                 |
| 12      | NO CLAIM CERTIFICATE RECEIPT                                                                        | " Received Rupees _____ (Rupees _____) being the amount against my/our final bill dated _____ for _____ (Name of Work) in full and final settlement of bill."                                                          |

EAST CENTRAL ZONAL OFFICE, PATNA

**NOTES: TAXES, DUTIES, LEVIES AND DEDUCTION AT SOURCE:**

1. Rates quoted shall be inclusive of all taxes like Income Tax, etc., but excluding GST.
2. The contractor shall be responsible to pay all statutory levies imposed by the State and Central Government such as Income Tax, Labour Cess and any other applicable taxes etc. But GST as applicable on works contract shall be paid to the contractor by the Corporation. Any payment by contractor to LIC/ recovery by LIC i.e. Salvage Value, Liquidated Damages, Penalty on Insurance premium etc. shall be recovered from the bill along with GST as per GST Act. This will supersede all provisions given in the tender elsewhere regarding GST.
3. Deduction at source of Income tax, Labour Cess etc. shall be made by LIC of India as per the provisions prevailing from time to time from the Running Account or Final Bills and remitted to the concerned Taxation Authorities/ State Government on behalf of the contractor.

EAST CENTRAL ZONAL OFFICE, PATNA

4. Contractor shall also be responsible to seek permission from local authorities/ administration before starting the work & during the progress of work for unloading/ keeping materials there or after completion of work, reqd. if any. The Work has to be carried out without disturbance/inconvenience/damage to the working offices/tenants, parking vehicles etc.
5. **Labour cess:** Rates are inclusive of Labour Cess and the same will be deducted from contractor's bill, as applicable.
6. All the Participating Bidders must have valid GST Registration certificate of a particular State/Union Territory at the time of submission of the Bid. In the eventuality of not having valid GST Registration Certificate with the State/Union Territory, where implementing works, the successful bidder will be required to obtain GST Registration Certificate of that particular State/ Union Territory where the works Contract will be implemented within a period of 21 days from the date of issuance of Letter of Acceptance, failing which the letter of Acceptance will be withdrawn and cancelled. Earnest Money deposit will also be forfeited. No extension of time period will be given whatsoever unless there remain unforeseen impediments with the issuing Authority of such GST Registration.

GSTR 2A of the respective state of the Corporation will reflect the Invoices of all Vendors who have uploaded the GSTR – 1 and if the taxes are not paid to the Government, then ITC already taken by the Offices will be reversed and shall be paid in cash by the Corporation along with further interest at notified rate. Such Vendors who do not pay taxes to the Government will have a low rating by the GST Portal and will be black listed for future dealing with the Corporation.

7. **The bidders are requested to note that deposit of EMD and payment of tender fee must be through specified mode of payment. Payment mode other than the specified modes of payment will not be entertained. No exemption of EMD / Tender fee will be given to MSME / NSIC registered bidders.**

### **GENERAL CONDITIONS OF CONTRACT**

1. **SITE:** The word "Site" wherever referred is of the "Premises" where the work has to be carried out as directed giving least inconvenience to occupants.
2. Work can be carried out before or after office hours or during nights, holidays and Sundays with prior written permission from the department, for which nothing extra shall be payable and the contractor shall cover for all such events in his quoted rates. Also, shifting the working office furniture, cupboards, etc., and rearranging the same so as to not to disturb the functioning of office may also be involved. In such an event,

EAST CENTRAL ZONAL OFFICE, PATNA

contractor shall comply with instructions of Engineer-in-charge. Rates quoted for various items of work shall cover for all such events and no separate payment will be made.

3. The contractors are requested to put their firm's endorsement on each page of the tender document in token of acceptance.
4. **WATER AND ELECTRICITY CHARGES** : Notwithstanding what is mentioned elsewhere in the tender, water and electricity ( supply at one point ), if provided by LIC, deduction will be made , from the value of work @ **0.5% of Gross value of work and shall be recovered from the bills of the contractor.**
5. **THIRD PARTY LIABILITY, DAMAGE TO NEIGHBOURING PROPERTY, LOSS OF MATERIAL AND WORKMEN'S COMPENSATION:**
  - 5.1 The Contractor shall be responsible for all injury to persons, animals or things, and for all damage to structural and/or decorative part of property which may arise from the operations or neglect of himself or of any Sub-contractor or any of his Sub-Contractor's employees, whether such injury or damage arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of his Contract. This Clause shall be held to include inter-alia, any damage to Building, whether immediately adjacent or otherwise and any damage to roads, streets, footpaths, bridges, or ways as well as all damage caused to the building, and the works forming the subject of this Contract by frost, rain, wind or other inclemency of the weather. The Contractor shall fully indemnify the Employer and hold him harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of all and any claim made in respect of injury or damage under any acts of Government or otherwise and also in respect of any award or compensation or damages consequent upon such claim.
  - 5.2 The Contractor shall fully indemnify the employer against any loss, damage or deterioration for whatever reason, of all materials brought at site and especially material supplied by or paid for partly or wholly by the employer.
  - 5.3 The Contractor shall reinstate all damage and loss of every sort mentioned in this Clause so as to deliver up the whole of the Contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of the third parties.
  - 5.4 The Contractor shall fully indemnify the Employer against all claims which may be made against the Employer by any member of the Public or other third party in respect of anything which may arise in respect of the works or in consequence thereof.
  - 5.5 The contractor shall at his own expense arrange to effect from the date of commencement & maintain till the date of virtual completion of contract, with any licensed general insurance company, a **POLICY OF INSURANCE (Contractor's All Risk Policy)** to cover all such risks detailed above viz. loss, damage & third party liability etc. The policy shall be of an amount as mentioned in Appendix to Conditions of Contract and in the joint names of the employer & contractor and shall be deposited with the employer and renewed as required from time to time during the currency of the contract.

EAST CENTRAL ZONAL OFFICE, PATNA

- 5.6** The Contractor shall also fully indemnify the Employer against all claims which may be made upon the Employer, whether under the **WORKMEN'S COMPENSATION ACT** or any other **STATUTE** in force during the currency of this Contract or at Common law in respect of any Employee of the Contractor or any Sub-Contractor and shall at his own expense effect and maintain until the Virtual completion of the work, with "licensed General Insurance Company" a **POLICY OF INSURANCE** of adequate amount in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the employer & renew the same as required from time to time during the currency of the Contract.
- 5.7** The Contractor shall be responsible for anything, which may be excluded from the Insurance Policies above referred to, and also for all other damage to any property arising out of or incidental to the negligence or defective carrying out of the Contract.
- 5.8** The amount of insurance to be taken for the above policies will be jointly decided between the contractor and the employer before issue of acceptance letter based on the tendered cost, nature of work, location of site, local hazards etc.

**RECOVERY FOR NON EXTENSION OF INSURANCE POLICIES (WORKMEN'S COMPENSATION AND CONTRACTOR'S ALL RISK POLICY INCLUSIVE OF THIRD PARTY LIABILITY)**

- 5.9** In default of the Contractor insuring as provided above, or having insured, failing to renew the same, as required, the Employer, on his behalf may so insure/renew and may deduct the premiums paid from any monies due or which may become due to the Contractor together with penalty amounting to Rs.10,000/- or double the premium amount whichever is more, for each extension of such policy.
- 5.10** The Contractor shall also fully indemnify the Employer in respect of any costs, charges or expenses arising out of any claim or proceedings at law and also in respect of any award of compensation of damages arising there from.
- 5.11** The Employer shall be at liberty and is hereby empowered to deduct fully the amount of any damages, compensation costs, charges and expenses arising or accruing any such claim of damage from any sum or sums due or to become due to the Contractor.
- 6. CONTRACT LABOUR ACT:** The contractor shall pay his labour as per the Contract Labour Act and observe hours of work and conditions of employment according to the existing rules under contract labour act. Further it shall be contractor's responsibility to ensure that regular payments to his workers are made as per minimum wages. The contractor shall fully indemnify LIC of India from any claim under Contract Labour Act. Labour License to be obtained from Central Labour Commissioner, if applicable.
- 7.** Tenderers should note that their rates quoted shall be firm during the currency of the contract irrespective of the quantity executed and no escalation shall be permissible. The currency of contract shall be inclusive of extensions if granted.
- 8.** No alterations or additions are to be made by the contractors to the text of Schedule of Quantities and other tender papers. Violation of this instruction entails rejection of the tender at the discretion of the Chief Engineer.
- 9.** Any tender which proposes any alterations to any of the condition laid down or which proposes any other condition of any description whatsoever is liable to be rejected at the discretion of the Chief Engineer.

10. Contractors should quote their offer in 'percentage' as given the schedule of quantities. The offer so quoted shall be applicable for all the items.
11. Contractors are allowed to submit their bills with minimum value as stipulated in triplicate.
12. Contractors to note that the quoted rates shall be firm throughout the currency of the contract. Price variation towards Materials, Labour, Steel , Cement etc., is not allowed and will not be paid. Rates to be quoted taking the current market rates of Steel and Cement into account. Rates quoted to be applicable for work at all levels. The use of lifts for taking materials shall not be permitted. The rates quoted shall exclusive of GST and inclusive of other taxes if levied by the State and Central Government. Only the GST will be paid by LIC separately at applicable rate.
13. The rates quoted shall cover for all tools, plants, scaffolding and everything necessary for proper execution of work to the entire satisfaction of the department.
14. The quoted rates are exclusive of GST and it will be paid separately along with the bill as per the applicable rate of GST at the time of bill.

**15. DEVIATION, VARIATION, EXTRA/DEVIATED ITEMS AND PRICING:**

- 15.1 The Contractor should note that unless otherwise stated, the tender is strictly **on Item Rate basis**. The quantities in the Schedule of Quantities approximately indicate the total extent of work and no variation i.e. additions, omissions or subtractions shall vitiate the Contract. No liability shall attach to the Employer for any error therein or variation there from.
- 15.2 The contractor may when authorized and shall when directed, in writing by the CE or the Corporation's Engineers, whom the CE may for that purpose appoint, add to, omit from, make alterations in, substitutions for, or vary the works shown upon the Drawings or described in Specifications or included in the priced Schedule of Quantities but the Contractor shall make no additions, omissions, alterations, substitutions or variations without such authorization or direction. A verbal authority or direction by the CE, if confirmed by the contractor in writing within 7 (seven) days, be deemed to have been given in writing. Rate is to be adjusted where basic price of materials are mentioned.
- 15.3 The rates of such altered, additional or substituted works shall be determined in accordance with the following.
  - a. The net rates or prices in the original tender shall determine the valuation of the extra work where such extra work is of similar character and executed under similar conditions as the work priced therein.
  - b. The net price of the items in the original tender shall determine the value of the items omitted. However, if omissions vary the conditions under which any remaining items of the work are carried out or if the amount of any omission relative to the amount of the whole of the Contract works or to any part thereof shall be such that in the opinion of the Chief Engineer, the net rate or price contained in the Priced Schedule of Quantities or Tender or for any item of work involves loss or expenses beyond that reasonably contemplated by the Contractor and is by reason of such omission rendered

EAST CENTRAL ZONAL OFFICE, PATNA

unreasonable or inapplicable, the Chief Engineer shall fix another rate or price as in the circumstance he shall think reasonable and proper.

- c. If the rate for any altered, additional, or substituted item of work is not specified in the schedule of quantities, the rate for that item shall be derived from the rate for the nearest similar item specified therein.
  - d. If the rate for altered, additional or substituted item of work cannot be determined in the manner specified above, then such items of work shall be priced on the basis of co-efficient of labour and materials as given in the latest CPWD rate analysis handbook and rates for labour and materials wherever applicable shall be the market rate prevailing at the time of execution.
  - e. Where such co-efficient are not available in C.P.W.D. rate analysis, the actual Labour/Materials involved and recorded by the Executive Engineer in executing the items shall be considered.
  - f. Where extra work cannot be properly measured or valued, the Contractor shall be allowed "Day Work" prices at the net rates stated in the Tender or the Priced Schedule of Quantities or, if not so stated, then in accordance with the local "Day Work" rates and wages for the district, provided that in either case vouchers specifying the date and time (and if required by the EE the names of workmen employed) and materials incorporated be delivered for verification to the EE or his representative at or before the end of the week following that in which the work has been executed. The EE is not bound to recognize the cost of materials furnished in vouchers; the CE at his discretion will fix the price of such materials based upon market value.
  - g. While fixing rates of extra items 15% (Fifteen percent only) shall be allowed over and above the basic rate of material (without GST), T&P, water charges and labour charges to cover all supervision, overheads, profits and all other applicable taxes/cess. GST on works contract will be paid separately.
  - h. The quantities in the schedule are provisional and may vary up to any extent. No extra items will be payable for variation in quantity.
  - i. For all extra items of work, the contractor should submit to the concerned Corporation's Engineer the necessary particulars along with his analysis and the rate he proposes to claim for consideration within a period of 4 (four) weeks from the time of cropping up of any authorized extra / deviated item. He shall also ensure that all the authorized claims are included in the final bill. If the contractor fails to submit his claim within the stipulated period or the period duly extended by the Corporation's Engineer, then the CE shall proceed to fix the rate for the item(s) and the same shall be final and binding on the contractor.
  - j. The Contractor shall note that Extra/Deviated items claim and/or any other claim whatsoever if submitted after submission of his Final Bill will not be entertained and considered by the Employer. The Contractor shall not be allowed to make any Additions/ Alterations/ Revisions / Changes/ Modifications/ Variations in the final bill, after the final bill is submitted by him.
16. The screws, nails, iron oxidized hinges, necessary fasteners, holdfast etc. required for fixing doors, partitions, panels etc shall be included in the quoted rates of the respective items. No separate payments shall be made for this purpose.

17. All materials used in the work shall be as per I.S. / C.P.W.D. specifications or as per quality specified in the tender and approved by the competent authority.
18. The contractor shall be responsible for any damages and shall replace or make good at his own expense any material lost or damaged or quality not approved.

**19. COMPENSATION IN THE FORM OF PENALTY FOR DELAY OF WORK:**

If the Contractor fails to complete the work by the date of completion stated in the "Appendix to Condition of Contract" or within time properly extended hereof and the C.E. certifies in writing that in his opinion the same ought, reasonably so, to have been completed, the Contractor shall pay or allow the Employer the sum named in the Appendix as "**Compensation In the Form Of Penalty for Delay of Work**" for the period during which the said works shall so remain incomplete and the Employer may deduct such damages from any money due to the Contractor. In case "**Compensation In the Form Of Penalty for Delay of Work**" in accordance with the above provision accrue to maximum limit as mentioned in the Appendix to the Conditions of the Contract, the Chief Engineer shall be at liberty to rescind the Contract and to get it completed entirely at the risk and cost of the Contractor through any other agency he decides to appoint. All extra expenses incurred shall be recoverable from the money due to Contractor or lying to his credit with the Employer against the present or any other Contract.

"**Compensation in the form of Penalty for delay of Work**" to be 1.5% of tendered value of work, per month of delay, to be computed on, per day basis. The total amount of 'Compensation in the Form of Penalty for Delay of work', not to exceed 10% of the tendered value of work.

20. All works are to be carried out as per local bye-laws with respect to stocking of material, supplying of labour etc. **Electrical work shall be carried out through a licensed electrician, as per IE rules, local electricity authority rules**, LIC material specifications and general conditions of contract and to the entire satisfaction of LIC Engineer. Alternate arrangement for restoring the supply shall be made without any extra charges.

**21. MEASUREMENT OF WORK:**

- 21.1** The measurements will be recorded in EXCEL format by the Construction Associate at the site as works progress. Any extra/ deviated work executed during the period will also be measured in EXCEL format after following all laid down processes.

The EXCEL sheet Measurement will be submitted by the Construction Associate to the LIC Site Engineer in both hard and soft format. The measurement then will be checked 100% by LIC Site Engineer and if required, the same shall be corrected by LIC Site Engineer to establish that the measurements so given by the Construction Associate is in order and complete in all respects.

Abstract of Bill in EXCEL and PDF will be submitted by Construction Associate. The Construction Associate on receipt of the corrected Hard Copy of Abstract of Bill from LIC

will prepare their Tax Invoice on their letter head and submit to LIC of India for further processing of their Bill for release of payment. The Tax Invoice will have zero correction.

- 21.2** If the contractor or his authorized representative does not attend for joint measurements periodically for the completed works, then the site engineer shall take measurements after giving notice in writing of at least 3 (three) days. Measurement recorded in the absence of contractor shall be intimated with a copy of such measurements to the contractor. If the contractor fails to countersign or record objections within a week from date of measurement then, such measurements recorded in his absence by the Site Engineer shall be deemed to be accepted by and binding on the Contractor.
- 21.3** The Contractor shall, without any extra charge provide all assistance with every appliance, labour and other things necessary for taking measurements and recording levels including test checking of such measurements by any person authorized by the Employer.
- 21.4** All work shall be measured net as fixed in its place. All measurements of 'cutting' shall be held to include for the consequent wastage on the materials used.
- 21.5** Except where any general or detail description of the works expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items for which procedure is not covered in the specification, measurement shall be taken in accordance with the relevant Standard Method of measurement issued by BIS and if for any item no such standard is available then a mutually agreed method shall be followed.

The item rate mentioned in the Schedule of quantities is for one ONE UNIT. The scope of work shall vary as per actual requirements. The payment will be made only as per actual as ascertained by joint measurements.

The measurement of work shall be as per latest IS code of measurements unless specified otherwise.

- 22.** All measurements of concealed items shall be got recorded before they are covered up / concealed.
- 23.** The final bill of the work should be submitted within 30 days of completion of work failing which LIC shall finalize the bill, which shall be binding on the contractor.
- 24.** The schedule of work to be done is enclosed herewith and the same is to be submitted to the department along with this conditions duly signed.
- 25.** In case of dispute the decision of the Chief Engineer, LIC of India shall be conclusive and binding on the contractor.

EAST CENTRAL ZONAL OFFICE, PATNA

26. Cutting in the partitions panels has to be done wherever required and directed for electrical switches etc.
27. Contractors to please note that the work is to be carried out in co-ordination with other agencies / occupants with least disturbance as directed. The Contractor should observe that his work shall not cause any nuisance to the public in general and to the neighboring occupants in particular.
28. **MULBA** : After completion of the work , the site should be cleared thoroughly of any mulba, debris etc., at the contractors own expenses and the rates quoted shall include the same.

**TESTING OF MATERIAL**: The LIC reserve the right to get the Material tested during the execution of works , however testing charges shall only be reimbursed to contractor if the material conforms to specification.

29. **VALIDITY**: The tender shall be valid for acceptance for a period of **3 months** from the last date of receipt of tender.
30. LIC reserves the right to accept any tender or to accept the tenders in part or to reject any or all the tenders without assigning any reason thereof.
31. Contractor please note that to carry out the said work permission if required from local authorities etc will be obtained by them including liasoning with them. No extra payment shall be made on this account. The contractor shall quote the rates on considering the same.
32. Extra care shall be taken about cleaning of the site so that it may not cause any hindrance to the users of the site while execution of the work.
33. **Security Deposit**: Security Deposit Shall be 5% of Yearly Contract Sum. The remittance of Security Deposit Shall be as per Appedix to Conditions of Contract.

**Note:**

1. While imposing the "Compensation in the Form of Penalty for Delay of Work" as indicated above, due consideration shall be given to the time factor needed for carrying out the necessary repairs.
2. At the end of the contract period, the entire system has to be handed over in working condition to the agency taking over the system for further CAMC/AMC. In case system is not functioning due to defective parts then the agency has to rectify the same and bring it to working condition. Nothing extra will be paid for the replacement of any parts, major or minor and agency has to replace the same with the approved make of Brands at their own cost.

**Special Note:**

1. **Termination of Contract**: If the service of contractor is not found satisfactory the contract shall be terminated by giving 15 days notice & security deposit shall be forfeited. LIC reserve the right to terminate the Contract at any time during the currency of the contract owing to statutory requirement or any other unforeseen reasons whatsoever. No claim whatsoever shall be payable by LIC on this count to the Contractor/ Vendor/ Construction associates.

## TECHNICAL SPECIFICATIONS

### Fire Hydrant System, Sprinkler System, Fire Alarm System

#### 1. SCOPE WORK

The scope of the work covers supply of materials, installation, testing and commissioning of Fire Hydrant System, Sprinkler system and Fire Detection & Alarm systems.

Copies of drawings of buildings and schedule of quantities are enclosed in the tender document.  
All the equipment and installation shall conform to specifications contained in Indian Standards.

EAST CENTRAL ZONAL OFFICE, PATNA

The installation of the systems shall conform to norms as per NBC 2005 - Part 4, IS 3844 and TAC. The installation of Fire Detection & Alarm system shall comply with the latest edition of relevant NFPA 72 E and IS: 2189 standards. The scope of work also includes preparation and submission of drawings for obtaining approvals (NOC) for the system from local authorities like State Fire Dept. and liaison works with the departments. All incidental expenses in connection with the same shall be borne by the contractor. For all approvals / NOC, statutory fees shall be remitted by the contractor initially. However, it shall be reimbursed on submission of original receipt.

### **FIRE HYDRANT SYSTEM**

#### **1. STANDARDS**

The manufacture, identification of material and testing of equipment covered in this specification shall comply with the latest editions as on date of opening of tenders of the appropriate standards of the following. Unless otherwise specified, Indian Standards are preferred. All the appliances and accessories shall carry IS or International certification and shall be of approved make.

IS: 1239 Mild steel, black ERW pipes, with fittings.

IS: 3589 Mild steel, black ERW pipes 200 mm dia, and above, with fittings.

IS: 10221 Code of practice for coating and wrapping of underground mild steel pipelines

IS: 823 Welding procedure

IS: 2062 Steel for General Structural Purposes

IS: 780 Cast iron sluice valve

IS: 903 Nozzle, Branch pipe, Female and Male couplings (Gun metal)

IS: 5290 Fire hydrant valve, gun metal with cap & GI chain.

IS: 908 Fire hydrants

IS: 8423 Water shield controlled percolation hose.

IS: 325 Induction motors

IS: 900 Installation of motors

IS: 13947 SDFUs

IS: 1554 PVC/PVC Al. power/control cables

IS: 1652 Batteries

IS: 694 PVC insulated cables (light duty) for working voltage upto 1100 volts.

IS: 1554 PVC insulated cables (heavy duty) for voltage upto 1100 volts.

IS: 1554 — do — for voltage 3.3 kV to 11 kV

EAST CENTRAL ZONAL OFFICE, PATNA

IS: 5959 Specification for polythelene insulated PVC sheathed heavy duty electric cables, voltage not exceeding 1100 V

IS: 5959 — do — voltage 3.3 kV to 11 kV

IS: 5578 Guide for marking of insulated conductors

IS: 1255 Code of practice for installation and maintenance of power cables.

IS: 3043 Code of practice for earthing.

IS: 5216 Guide for safety procedures and practices in electrical work.

In case where the offer deviates from the specified standards, the tenderer shall indicate clearly in the offer the alternative standards proposed to be adopted and details thereof.

Unless otherwise mentioned, all applicable codes and standards shall be of the latest editions as published by the Indian Standards and all other such as may be published by them during the tenure of the contract, and shall govern in respect of workmanship, properties of materials, installation and methods of testing. In case where suitable Indian Standards or TAC norms are not available, generally accepted codes and practices as approved by the LIC shall be adopted. Any changes or modifications directed by the LIC shall also be incorporated by the contractor during execution of the work.

## **2. PUMPS AND ACCESSORIES**

Pumps shall be direct-coupled and not belt-driven. Parts of pumps like impeller, shaft sleeve, wearing sleeves, etc. shall be of non-corrosive metal such as brass or bronze. Pumps shall be capable of furnishing not less than 150% of the rated capacity at a head not less than 65 % of the rated head. The shut-off rate shall not exceed 120% of the rated head in the case of horizontal pumps. Each pump shall be provided with a pressure gauge on the delivery side between the pump and the non-return valve and a name plate showing the delivery head, capacity and the RPM. Pumps shall be securely mounted on a robust bed plate of horizontal type, and shall be free from vibration at all varying loads.

The two electric driven main pumps shall be interconnected through pressure switches and panel board such that only one electric pump shall operate first in the event of low system pressure and the latter operates automatically in case of failure of the former within a specified switchover time or fall in pressure.

The Jockey pump shall have automatic starting and stopping arrangements to maintain the system pressure. In the event of low system pressure, the jockey pump shall operate to maintain the system pressure. Sequence of operation of pumps are mentioned in the section 'Inspection and Testing'.

### 3. **HYDRANTS SYSTEM AND PIPING**

#### 1 **MS Pipes**

The MS pipes used shall be of standard IS 1239, heavy duty type (Class C), electric resistance welded and shall be free from scale, cracks, surface flaws and other defects. For pipes 200 mm dia. and above IS 3589 shall be applicable.

#### 2 **Above ground (AG) / Exposed pipes**

Above ground (AG) / exposed pipe lines and fittings shall be coated with two coats of zinc chromate primer and two coats of enamel paint as per IS approved colour code. The surfaces shall be properly cleaned before applying the primer. AG pipes shall be supported at regular intervals on masonry, RCC, truss, beams, roofs, trenches etc. Air release valves shall be provided in the hydrant lines at an interval of 50 m.

The spacing of pipe supports shall be as shown below:-

Pipe dia. in mm

80, 100 and 125 : 3.5 m

150, 200 and 250 : 5.0 m

around the pipes and the overlap is maintained at 15 mm. The material shall conform to IS 10221.

#### 3 **Hydrant valves**

The external/internal fire hydrant valves shall be of oblique type single headed of 63 mm dia. conforming to IS-5290 suitable for connecting to 80 mm pipe. The hydrant shall be complete with hydrant valve, orifice plate, other fittings, etc. The hydrant couplings shall be flanged stainless steel with instantaneous female spring-lock of 63 mm dia. and valves shall be of screw down type. Orifice plates of suitable design shall be provided for hydrants where pressure exceeds 7 Kg per Sq. cm.

The number of fire hydrants in a main of 80 mm dia. shall not feed more than one hydrant, that having a dia. of 100 mm shall not feed more than two hydrants, that having a dia. of 125 mm shall not feed more than three hydrants. The pressure at the most highest end hydrant in the hydrant mains shall be restricted to 3.5 Kg per Sq. cm. All hydrant outlets shall be situated 0.9 m above floor level.

#### 4 **Hose pipes**

EAST CENTRAL ZONAL OFFICE, PATNA

The hose pipes for hydrants shall be 15/7.5 m long, 63 mm dia. water shield controlled percolation canvas conforming to IS-8423 with stainless steel 63mm size male coupling at one end and female coupling at other end conforming to latest IS. If hose is kept in hose boxes alongside hydrants, each box shall contain two lengths of hoses. For use of each hydrant in staircase landing or with each internal hydrant, two lengths of hose 7.5 m shall be provided and in case of external hydrants two lengths of 15 m shall be provided. All the hoses and branch pipes/nozzles shall be kept inside the boxes as per standard practices.

5 **Hose reel**

The hose reel shall consist of 30 m long 20 mm dia. high pressure braided rubber lined hose mounted on heavy duty circular MS drum complete with gun-metal shut-off valve, nozzle, etc. The hose reel bracket shall be of MS fabricated or cast iron swing type suitable for 90 deg. smooth and free rotation in vertical plane conforming to IS-884.

6 **Hose boxes**

The fire hose boxes shall be of size 750x250x600 mm, 16 SWG sheet steel with front side glass of 4 mm thick, lockable hinged door and painted with one coat of primer and two coats of synthetic enamel paint of approved colour..

7 **Couplings**

All couplings shall be of the instantaneous spring-lock type and the nozzles shall be of not more than 16 mm in dia. All couplings in the branch pipes and nozzles shall be of stainless steel and shall comply with relevant IS code. The hose shall be attached to the coupling.

8 **Foot valve**

It shall conform to IS:4038 standard and shall be of ball type, C.I. metallic and with G.M. trim & grey C.I. / galvanized steel perforated screen with flanged connection, nut bolts, gasket, washers etc. to be connected only for negative suction. It shall be tested certified for hydraustatic test pressure, for Body : 8.5 kg/cm<sup>2</sup> and Seat : 2 kg/ cm<sup>2</sup> .

9 **Fire brigade outlets**

The fire brigade collective breaching shall be with 150 mm flange outlet connection with gun-metal twin-Siamese collecting head having 4 instantaneous outlets with built-in check valves. The fire brigade breaching shall be connected to the sump and the main header.

10 **Air cushion tank**

The air cushion tank shall be of 300 mm dia. and 1500 mm height fabricated out of 8 mm MS sheet steel and shall be complete with 20 mm dia. air release valve and associated piping work,

etc. It shall be constructed with air outlet at the top. Drain valves of gunmetal shall be provided at the lowest points of the piping work to enable draining of water from the system. The drain valves assembly shall include nipple and PVC rubber hose.

11 **Sluice Valve (SV)**

It shall be of IS 780 standards. Construction shall be of inside screw, non-rising stem for water purpose and flanged type. Pressure class shall be of PN 1.0 and tested to 15 kG/Sq.cm pressure. Seat ring shall be of gun metal as per IS 318. Gasket packing shall be of CAF / Graphited asbestos.

12 **Non Return Valve (NRV)**

It shall be of IS 5312 standards. Construction shall be of swing type with bolted cover for water purpose and flanged end construction. Pressure class shall be of PN 1.0 for water purpose and flanged type.

13 **Gun Metal Gate Valve**

It shall be of IS 778 standards. Construction shall be of globe and lift type with screwed bonnet and inside female screwed construction. Packing shall be of asbestos. Pressure class shall be of PN 1.0. End connection shall be of screwed type.

14 **Pressure gauges**

It shall be of dial type with Bourden tube element of SS 316. The dial size shall be 150 mm dia. and scale division shall be in metric unit marked in black on white dial. It shall be comprised with snubber, isolation cock, nipples, tail, connecting pipes, etc.

15 **Fittings**

Fittings installed shall be of MS conforming to IS-1239 (Part-I & II). All fittings shall be able to withstand at least a pressure of 150 % of the maximum working pressure. Welded fitting according to the laid down welding procedure are permitted. Welded parts shall be suitably coated after welding as per the requirement of the areas. Welded joints are not permitted for fittings of less than 50 mm dia.

16 **Pressure switches**

It shall be of industrial type, single pole, double throw electric pressure switching designed for starting or stopping equipment within the pressure of the system drops or exceeds the pre-set limits. All switches shall have ¼" BSP (F) inlet connection and screwed cable entry for fixing cable gland.

17 **Flanges**

EAST CENTRAL ZONAL OFFICE, PATNA

The flanges shall be of heavy duty type manufactured from material as per standards mentioned having flat face as per requirement and its dimensions shall also satisfy appropriate standards. All bolt holes in flanges shall be drilled. The drilling of each flange shall be in accordance with relevant Indian Standards. The gaskets used in all flange joints shall be of standard size and are to be approved, verified and checked before use. Fixing of gasket is to be as per standard procedures so as to ensure efficient and quality type joints. The flange faces shall be true and perpendicular to the axis of the pipes, and if due to other various reasons, such as, but not necessarily limited to the process and / or layout requirements, it is not feasible, the Contractor shall ensure that the joints shall be drawn up in order to provide even and adequate uniform pressure on gaskets. All flanges shall be installed such that the bolt holes straddle the normal centerlines.

18 **Welding procedure**

The welding procedure shall only be carried out by fully trained and experienced welders and shall conform to IS-823. LIC reserves the right to set the correct welding procedure, if not satisfied. The welding electrode shall be of reputed make with ISI mark, and shall have suitable coating complying with relevant Indian Standards.

**INSPECTION AND TESTING**

**(Hydrant System)**

1 **Inspection - General**

All site fabricated work/ material shall be subject to inspection in cleaned condition, prior to erection. At no event, site fabricated work /material shall be installed in position without inspection and approval by LIC. The Contractor shall ensure that each stage of fabrication is carried out in compliance with the procedures specified in the TAC manual and IS standards as applicable and/or specified in this document.

The contractor shall conduct sample tests of all the materials supplied at reputed laboratories/agencies as directed by LIC at his own cost and test reports are to be submitted. Inspecting officials of LIC and Local Authorities shall have the right to access the premises of the work at any time with or without giving prior notice. All the formalities or procedures for conducting the inspections by the authorities as required by them shall be arranged by the contractor free of cost.

All testing shall be carried out in the presence of LIC / statutory authorities and test registers shall be maintained by the contractor. The contractor shall provide all material, tools, equipment,

EAST CENTRAL ZONAL OFFICE, PATNA

instruments, services and personnel required to perform the tests and remove debris/water resulting from cleaning and after testing free of cost.

The original test certificates of all tests conducted are to be forwarded to LIC. After conducting the tests, any defects found on materials, equipment, piping, etc. shall be got rectified / repaired by the Contractor without any extra cost.

## 2 Testing

Before energizing electrically operated equipment, care shall be taken to meet the local electrical rules and regulations, earthing of the body, verifying availability of safe insulation resistance value, etc. Also confirm the motor enclosure to the level of protection required for the particular application.

### a. Pumps

The pumps shall be tested according to the standard recommendations of the manufacturer. The following parameters are to be recorded and plotted and submitted to the LIC.

- a. Discharge Q
- b. Pressure P or Head H
- c. Motor voltage and current.
- d. Efficiency

The power consumption is to be computed and cross-checked with manufacturers data. Any abnormalities, if noted, shall be brought to the notice of the manufacturer and necessary corrective action be taken before commissioning and handing over, without any extra cost. Manufacturers test certificates shall also be submitted to LIC for verification.

### b. Piping

All piping shall be tested by filling water, removing air locks, foreign materials, etc. and applying pressure at 1.5 times of the maximum working pressure and see that the pressure drop is within 0.5 Kg per Sq. cm over a period of 2 hours. The testing shall be carried in sections by blocking both ends or closing the valves provided. After completion of the installation and connecting to the mains of pumping system the installation shall once again tested and rectify breakage if any or replace the defective material, free of cost.

At least 10% of the total weld joints on pipes shall be tested by radiography as per TAC requirement. Holiday tests for wrapping and coating of MS pipes is essential as per IS- 10221. Holiday tests may preferably be carried out by flexible and detachable ring probe which shall enable the entire 360 deg. of the surface of the pipe to be scanned.

EAST CENTRAL ZONAL OFFICE, PATNA

c. Electrical system

The following tests are recommended:-

- i) Earth resistance
- ii) Cable Insulation
- iii) Trial run and testing of diesel engine.
- iv) Resistance of metal conduits/sheaths (Earth continuity test)

Insulation of the cables shall be not less than one mega ohm when tested with a 500 volts meggar for any particular section of the wiring.

In case of cables encased in metal conduit or metallic sheathing, the total resistance of the conduit or sheathing from the earthing point to any other position in the completed installation shall not exceed 2 Mega Ohms.

d. Hydrant system

The entire hydrant system shall be tested in the presence of LICl to ascertain the functioning of each system, equipment, etc. as desired by LICl. The contractor shall hand over the system only if it is proved that the system performs as per the specifications.

**SEQUENCE OF OPERATION OF PUMPS**

The electric driven pumps shall be interconnected through pressure switches and panel board such that only main pump operates in the event of low system pressure and the stand by pump operates automatically in case of failure of the former within a specified switchover time or fall in pressure.

The starter panel shall continuously monitor the mains supply on all the 3 phases for total/ partial failure and system pressure through pressure switches. The electric driven pumps shall start both in auto /manual modes. The pumps shall not be stopped automatically afterwards and it shall be stopped manually.

The contractor shall carry out necessary arrangements for the supply and installation of items like timer, sensors, control cabling, etc. in the panels to function the pumps as described

The Jockey pump shall have automatic starting and stopping arrangements to maintain the system pressure. Jockey pump shall not be in operation while the main pump is in operation. Jockey pump shall be operated by both auto /manual modes. Under normal conditions, the water pressure in the hydrant lines shall be 9 kg/sq.cm. and the auto/manual switch shall be in the auto mode. When the pressure drops to 8 kg/sq.cm., the jockey pump shall start automatically through pressure switches arrangements and when pressure develops to 9 kg/sq.cm the pump shall stop automatically.

## **SPRINKLER SYSTEM**

### **1. Sprinklers**

The design of sprinkler system is designed for a Design Density of 5 lpm/Sq.m and Assumed Maximum Area of Operation (AMAO) is 360 Sq.m. The minimum sprinkler discharge pressure shall be 0.35 bar and 'K' factor shall be 80. Sprinkler shall not be reconditioned or repaired. Defective sprinklers shall be replaced with new ones. Sprinklers and multiple controls shall not be painted except for the identification purpose. Sprinklers shall be of 'Conventional Pendent' type with size 15 mm dia. It shall produce a spherical type of discharge with a proportion of water being thrown upward the ceiling. Sprinklers shall have temperature rating for 68 deg. C with Red colour code. It shall be of Quartzoid Bulb suitable for installation indoor as well as outdoor and shall have a maximum coverage of 12 Sq.m per sprinkler.

#### **Arrangement of sprinklers**

Sprinklers shall be installed with the deflector parallel to the slope of the ceiling. Sprinklers shall be not spaced at less than 2 m. The distance between the boundary and sprinklers when measured along the range pipe shall not be more than 0.5 times the spacing between the sprinklers and range pipes. As far as possible, sprinklers shall be located away from the columns. Sprinklers shall not be connected directly to distribution and main pipes. Sprinklers shall not be provided in the following areas of the building:

- ✓ Stairs, spaces below stair headings.
- ✓ Toilets.
- ✓ Rooms containing electric power distribution apparatus.
- ✓ Control rooms.

Number of sprinklers that can be installed on range pipes is as given below:

25 mm dia. Range pipe: 2 nos. max.

32 mm dia. Range pipe: 3 nos. max.

40 mm dia. Range pipe: 4 nos. max.

50 mm dia. Range pipe: 9 nos. max.

Number of sprinklers that can be installed on distribution pipes is as given below:

32 mm dia. distribution pipe: 3 nos. max.

40 mm dia. distribution pipe: 6 nos. max.

EAST CENTRAL ZONAL OFFICE, PATNA

50 mm dia. distribution pipe: 9 nos. max.

65 mm dia. distribution pipe: 18 nos. max.

## 2. Alarm valve

Alarm valves shall be fitted on the main supply pipe immediately above the main control valve leading to the sprinkler installations. The alarm valve shall have the following accessories:

Main Stop Valve - 1 No. shall be fitted immediately downstream of the alarm valve and shall be at fire brigade access level.

Test Valve - 1 No. shall be provided to test the hydraulic alarm or any electric alarm pressure switch if provided by drawing water from the downstream side of a wet alarm valve. It shall be installed close to the alarm valve.

Drain valve - 1 No. shall be fitted to allow drainage from immediately downstream of the alarm valve.

Water motor alarm – 1 No. shall be fitted as close as possible to the alarm valve. It shall be installed with its gong on the outside of an exterior wall. A strainer readily accessible for cleaning shall be fitted between the motor nozzle and alarm valve connection. The water outlet shall be positioned so that any flow of water can be seen. The pipe work to the water motor shall be galvanized. Any device to reduce the frequency of false or intermittent alarms fitted to the installation shall be suitable for sprinkler service.

Pressure gauge - No. shall be fitted immediately downstream of the alarm valve. Pressure gauges fitted shall comply with relevant IS standards. The scale sub-division shall not exceed 0.2 bar for a maximum scale value upto and including 10 bar.

## 3. MS Pipes

The MS pipes used shall be of standard IS 1239, heavy duty type (Class C), electric resistance welded and shall be free from scale, cracks, surface flaws and other defects. For pipes 200 mm dia. and above IS 3589 Class '2' shall be applicable.

### a. Exposed/Above ground (AG) pipes

Exposed/Above ground (AG) pipe lines and fittings shall be coated with two coats of zinc chromate primer and two coats of enamel paint as per IS approved colour code. The surfaces shall be properly cleaned before applying the primer. AG pipes shall be supported at regular intervals on masonry, RCC, truss, beams, roofs, trenches etc. Air release valves shall be provided in the hydrant lines at an interval of 50 m.

The spacing of supports shall be as shown below:-

EAST CENTRAL ZONAL OFFICE, PATNA

Pipe dia. in mm

80, 100 and 125 : 3.5 m

150, 200 and 250 : 5.0 m

b. Fittings

Fittings installed shall be of MS conforming to IS-1239 (Part-II). All fittings shall be able to withstand atleast a pressure of 150 % of the maximum working pressure. Welded fitting according to the laid down welding procedure are permitted. Welded parts shall be galvanised or suitably coated after welding as per the requirement of the areas. Welded joints are not permitted for fittings of less than 50 mm dia. Air release valves are to be provided in the main ring wherever necessary to permit air locks in the delivery side of the pipe lines.

c. Flanges

The flanges shall be of heavy duty type manufactured from material as per standards mentioned having flat face as per requirement and its dimensions shall also satisfy appropriate standards. All bolt holes in flanges shall be drilled. The drilling of each flange shall be in accordance with relevant Indian Standards. The gaskets used in all flange joints shall be of standard size and are to be approved, verified and checked before use. Fixing of gasket is to be as per standard procedures so as to ensure efficient and quality type joints. The flange faces shall be true and perpendicular to the axis of the pipes and if due to other various reasons, such as, but not necessarily limited to the process and / or layout requirements, it is not feasible, the Contractor shall ensure that the joints shall be drawn up in order to provide even and adequate uniform pressure on gaskets. All flanges shall be installed such that the bolt holes straddle the normal centerlines.

d. Supports for sprinkler piping system

Sprinkler pipes shall be supported from the building structure which itself shall be capable of supporting the water filled pipe work and shall not impair the performance of sprinklers under fire conditions. Pipe work shall not be used to support any other loads. Supports shall not be welded or fastened directly to the pipe work. The thickness of all parts of pipe supports shall not be less than 3 mm. Wherever possible, pipes shall be supported from non-combustible building elements. Pipe works in corrosion areas shall be of either stainless steel or suitably protected against corrosion. Standard pipe hangers such as solid ring, swivel ring, clip, band hanger, bracket, ceiling flange, clamp, etc. shall be used for supports. The spacing between the pipe supports measured along the line of connected pipes shall not be less than the following:

EAST CENTRAL ZONAL OFFICE, PATNA

Up to 65 mm : 4.0 m

65 mm to 100 mm : 6.0 m

100 mm : 6.5 m

e. Welding procedure

The welding procedure shall only be carried out by fully trained and experienced welders and shall conform to IS-823. Engineer-in-Charge reserves the right to set the correct welding procedure, if not satisfied. The welding electrode shall be of reputed make with ISI mark, and shall have suitable coating complying with relevant Indian Standards. Welded joints shall not be permitted for pipes having diameter less than 50 mm, but it shall be screwed using sockets.

**INSPECTION AND TESTING**

**(Sprinkler system)**

Sprinklers

It shall be factory tested for operation characteristics and chemical tests. Necessary test results shall be submitted before supply. If required the above tests shall be conducted as per the requirement of the Engineer-in-Charge at the time of installation at no extra cost.

Sprinkler alarm valve

The pump shall start automatically and the supply pressure at the appropriate flow rate. The drain valve fitted above the alarm valve shall be opened and the time taken for the alarm gong to operate be noted. There shall not be a significant variation in the timing. The pressure at the "C" guage of the alarm valve shall be noted at the full load condition of the pump and the value should match with that of the specification. The proper functions of the alarm gong associated with the alarm valve and its level of audibility shall be checked. An audibility level of 85 db above the background noise level is required. Necessary testing equipment shall be arranged by the contractor free of cost.

While conducting the tests, the water flowing through the test valve shall be equivalent to the flow through one sprinkler. It should auto start the pumps and activate the alarm motor and gong. When the test valve is closed, the water flowing through the test valve should stop.

## **FIRE ALARM SYSTEM**

### **1. Manual Call Points (MCPs)**

It shall be of 'break glass' type, and 1.5mm thick welded sheet steel or 3 mm thick cast aluminium. The front glass shall be breakable. The MCPs shall be recess mounted suitable to support the fire panel. It shall form an integral part of the fire detector system. The housing shall be dust/vermin proof properly sealed with rubber lining. The glass frangible element shall keep a push button pressed inside such that in the event of breaking the glass, the push button is released to actuate an alarm in the control panel.

Where sheet steel is used for, this shall be thoroughly cleaned off dust, dirt, grease and rust if any and two coats of anti rust primer shall be given both inside and outside. This shall be followed by two coats of synthetic enamel paint in fire red colour on the external surface that will be visible on installation. In the case of cast aluminium body for a call box, the surface shall be neatly finished with red colour paint. The following words shall be painted on the front of the call box in contrasting colour with a letter size of not less than 5mm.

#### **"BREAK GLASS IN CASE OF FIRE"**

Installation requirements:-

Manual call points shall be located at exit space and shall be installed at a height of 1.4 m above the floor at an easily accessible position. They shall be installed at easily accessible, well illuminated positions, preferably in a contrasting background so that they are easily noticeable from either direction. They may be semi-recessed so as to project by 10mm. They shall be installed free from obstructions.

### **2. Hooters**

The loop hooters shall be so arranged that when any alarm operates all the hooters through out the premises shall be activated. The hooters at the fire alarm shall be electronic type having frequency of suitable frequency range. The hooters shall be capable to produce a sound output of 90 db at 1 m. Hooters shall be of loop powered and no separate power is required.

Fire alarm hooters shall not be used for any purpose other than for fire operations. When installed flush with a false ceiling these shall match the ceiling surface. Necessary provisions such as metal/ wooden boxing or frame work, if required, to accommodate the hooters shall be provided in

EAST CENTRAL ZONAL OFFICE, PATNA

the ceiling. It shall be installed at a height not lower than 2.4 m, except when recessed in a false ceiling of lower height, in such cases the hooters shall be recessed at false ceiling level.

The panel hooters in the respective panels shall be actuated automatically as soon as fire alarm signal is initiated from any trigger device connected to them. These shall also be sounded when there is a fault alarm signal within their areas of control. The sound shall be continuous and of the same characteristics from all fire alarm hooters in a building.

The isolator module shall mount in a standard suitable size electrical box or in a surface mounted back box. It shall provide a single LED that shall flash to indicate that the isolator is operational and shall illuminate steadily to indicate that a short circuit condition has been detected and isolated.

### 3. Fire Alarm Control Panel

The fire alarm control panel shall be designed to give reliable and continuous operation for long time with several advantages features. The panel shall be conventional type suitable for 2 wire loops system. Being modular in design, it shall be very easy for maintenance and testing of the system. Fire Alarm panel consists of following plug in type modules

1. Power module.
2. Charger module.
3. Control module.
4. Loop modules.

The fire alarm control panel shall be housed in a steel enclosure. It shall also be finished with hard wear textured epoxy paint/ powder coated. Cable entries shall be provided on the top and bottom of the panel.

The system capacity shall be based on the number of devices and control modules. Each devices in the system shall be identified by its unique address position on the two wire loop. The panel retains command over the alarm process, LED indicators, automatic test feature and loop hooters.

#### a. Basic system Functional Operations

EAST CENTRAL ZONAL OFFICE, PATNA

When a fire alarm/trouble condition is detected and reported by one of the system initiating devices or appliances, the following functions shall immediately occur:

- ✓ The system Alarm LED shall flash or the system trouble LED shall flash.
- ✓ A local piezo-electric signal in the control panel shall sound.
- ✓ The LCD display shall indicate all information associated with the fire alarm/trouble condition, including the type of alarm point and its location within the protected premises.

**b. Enclosures**

The control panels shall be housed in cabinets suitable for surface or semi-flush mounting. Cabinets shall be corrosion protected, given a rust-resistant prime coat, and manufacturer's standard finish.

The back box and door shall be constructed of min. 16 gauge sheet steel with provisions for electrical conduit connections into the sides and top. The door shall provide a key lock and include a transparent opening for viewing all indicators. For convenience, the door shall have the ability to be hinged on either the right or left-hand side.

The control unit shall be modular in structure for ease of installation, maintenance, and future expansion.

**c. Power supply**

The power supply units shall operate on 240 Volts AC, 50Hz, and shall provide all necessary power for the smooth operation of system. In case of failure of main power supply the power supply unit shall draw power from a set of standby batteries. The capacity of the battery set shall be sufficient to meet the required hours full functioning of the complete system under alarm conditions. It shall provide a battery charger using dual-rate-charging techniques for fast battery recharge. It shall charge completely discharged batteries within a 12-hour period. It should provide meters to indicate battery voltage and charging current.

**d. Batteries and External Charger**

**Battery**

EAST CENTRAL ZONAL OFFICE, PATNA

Battery shall have sufficient capacity to power the fire alarm system for not less than two hours in alarm condition and at least 8 hours in normal condition. The batteries are to be completely maintenance free.

#### **External Battery Charger**

Shall be completely automatic, with constant potential charger maintaining the battery fully charged under all service conditions. Charger shall operate from a 230 volt 50 hertz source. It shall be rated for fully charging a completely discharged battery within 12 hours while simultaneously supplying any loads connected to the battery. It shall have protection to prevent discharge through the charger. It shall also have protection for overloads and short circuits on both AC and DC sides.

#### **4. Control Cable**

The control cable for wiring fire alarm system shall be 3 x 1.5 sq.mm PVC Copper cable. Cables shall be laid as per relevant installation standards. The size of these cables are specified in schedule of requirements.

#### **5. Conventional Detectors**

All types of detectors shall be of manually programmable type using dip-switches or handheld programmer or from fire control panel. The detector shall have no moving parts of components subject to wear. It shall be possible to test the detector in the field. The response of a detector shall always be clearly visible from outside by a flashing light on the base. The detector shall connect to the control unit via a fully supervised two-wire circuit. A built barrier shall prevent entry of insects into the sensor. The detector shall be designed for fast and simple cleaning.

All electronic circuits must be solid state devices and virtually hermetically sealed to prevent their operation from being impaired by dust dirt or humidity. All circuitry must be protected against usual electrical transients and electromagnetic interference. All radioactive parts of the source, if any, shall be fully gold plated. The detector shall be inserted into or removed from the base by a simple push-twist mechanism to facilitate easy exchange for cleaning and maintenance.

The smoke & heat detectors shall fit into a common type standard base. The standard base shall be supplied with a seal plate, preventing dirt, dust, condensation or water reaching the wire terminals or the detector points. Detectors shall be provided with a MS box for entry and termination of armoured cable and to protect detectors terminals.

EAST CENTRAL ZONAL OFFICE, PATNA

At the time of installation and prior to commissioning, every detector shall be allotted an identification number. Detectors shall not be either partially or totally recessed in ceiling or wall. Detectors shall be suitably protected where they are liable to be subjected to mechanical damage. Detectors shall not be painted or coated or covered in any manner after installation as this will adversely affect the sensitive of operation.

### **Smoke detectors**

It shall be of optical type. Smoke detectors shall quickly respond to smoke containing small particles normally produced and automatically adjusts sensitivity without needing operator intervention.

### Technical Specifications (AMC)

Site Address: East Central Zonal office, Jeevan Deep Building, Exhibition Road, Patna-800001.

List of Systems Installed: As given in table below.

| Trades               | Description                                                                                                                                                                                     | Qty | Unit |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| <b>A</b>             | <b>Systems to be covered in AMC ( Comprehensive Annual Maintenance Contract)</b>                                                                                                                |     |      |
| Fire Alarm System    | Microprocessor based Loop, addressable Fire Control Panel complete.                                                                                                                             | 1   | Set  |
|                      | Analogue Addressable Multi-censor heat/smoke detectors                                                                                                                                          |     |      |
|                      | 1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> & 6 <sup>th</sup> floor (LIC Jeevan Deep Building) including common areas                               | 160 | Nos. |
|                      | Heat Detector                                                                                                                                                                                   | 48  | Nos. |
|                      | Fire Alarm Panel-32 Zone, 4 Zone                                                                                                                                                                | 8   | Nos. |
|                      | Addressable type Manual Cal Points                                                                                                                                                              | 6   | Nos. |
|                      | Hooters                                                                                                                                                                                         | 8   | Nos. |
|                      | Addressable type Response Indicators                                                                                                                                                            | 18  | Nos. |
| PA System            | 6 Zone pre -amplifier (zone call station) with microphone system & speaker and including all other accessories                                                                                  | 1   | Set  |
| <b>B</b>             | <b>Systems to be covered under AMC (Annual Maintenance Contract) Jeevan Deep &amp; Jeevan Jyoti Building</b>                                                                                    |     |      |
| Fire Fighting System | Complete Fire Fighting system having pressure switches, Sprinklers, hose reel, drums, branch pipes, valves etc. Fire Pumps & accessories installed in lower/ upper basement as detailed below:- |     |      |
|                      | Main Fire Pump (60 HP) for sprinkler/ hydrant wet riser application-to be provided                                                                                                              | 1   | set  |
|                      | Auto-Diesel Engine Driven Pump (60 HP)-to be repaired                                                                                                                                           | 1   | Set  |
|                      | Jokey Pump (10/20 HP)- to be repaired                                                                                                                                                           | 1   | Set  |

**Note: - The above quantities are tentative & may vary, agencies are requested to visit the site before quoting Rates**

**Reg: E- Tender for Annual Maintenance Contract of Fire Alarm System, PA System and Fire Fighting System installed at ECZO, Jeevan Deep Building, Exhibition Road, Patna-800001**

**A. SCOPE OF WORK FOR COMPREHENSIVE ANNUAL MAINTAINANCE CONTRACT**

- 1) **The Fire Alarm & PA (Public Address) System** is advanced & Programmable. The Maintenance of Fire Alarm & PA System shall be comprehensive in nature inclusive of supply of all spare parts & accessories according to original make of systems installed (such as Detectors, MCP, Hooter, Fire Alarm Panel, RI, Amplifiers, circuit wiring etc.), which shall require for the smooth & effective functioning of the Fire Alarm & PA System. Scope of the work also includes Monitoring & Programing of the system if required for keeping it running. Contract shall be inclusive of attending the breakdown calls & complaints as and when required. The following works/ checks are required to be performed on Monthly / Quarterly/ Half yearly basis and record all activities in service report with date and time which shall be counter signed by OS/Estate department of the Division. Entire PA system and Fire Alarm System installed in the building including all common areas shall be covered under this C-AMC.

**NOTE :- The tenderers has to do the work in the following manner :-**

1. It is the responsibility of the contractor to get the drawing prepared and obtained approval from LIC as well as concerned FIRE AUTHORITY showing the entire system i/c fire water tank & pump room before commencing the work and proper liasoning is to be maintained all times.
2. Inspection of installation by concerned FIRE AUTHORITY after completion of work, is the sole responsibility of tenderer and obtain NOC from them. Any inspection fee is paid by the contractor to the FIRE AUTHORITY will be reimbursed by LIC on production of challan/bill after submission of NOC to our office.
3. Please note that the entire electrical installation work are to be carried out as per I.E. rules, IS specifications, general Terms & conditions of contract, and to the entire satisfaction of LIC, through valid licenced electrical contractor. The electrical agency should be got approved from LIC before commencement of the electrical work.
4. The rate shall be inclusive in the items for preparation & approval of drawing and obtaining NOC from concerned FIRE AUTHORITY for which nothing shall be paid extra in this regard.

**Monthly Check**

- A.C supply of battery charging indicators.
- Checking of battery charging indicators.
- Checking of individual Zone fire indicators.
- Checking of individual Zone fault indicators.
- Checking of external alarm/hooters.
- Checking of visual detectors.
- Checking of manual test of P.A. Systems.
- Checking of batteries and operation on standby power.
- Re-set & re- programing of Panel if required & faults/errors remove.

EAST CENTRAL ZONAL OFFICE, PATNA

### Quarterly Check

- Checking of manual Call Point
- Checking of response indicator
- Checking of exit sign boards.
- Actuation of one some detector in each floor/Zone.

### Half Year Check

- Cleaning of smoke and heat detectors.
- Actuation test of heat detectors.
- Complete overhauling of the control panel.

### Emergency Visits

- Within 12 hours after call on any working day (9.30A.M to 6 P.M) for major fault ,breakdown of Fire Alarm Panel and any other emergency.

2) During the checking/serving, if found or observed that any component of the system is defected/damaged will be replaced by new.

## B. SCOPE OF WORK FOR ANNUAL MAINTAINANCE CONTRACT

### Fire Fighting System:-

1) The complete Fire Fighting System includes Diesel Pumps, Main Fire Pumps & Jockey Pressurization Pumps, Wet Risers, Fire Hose Cabinets, Yard Hydrant Valves, Landing Valves installed in entire building including common areas etc.

It will be an overall responsibility of maintenance agency to keep the entire Fire Fighting System in healthy & working condition by continuous & regular maintenance of Fire Fighting System, Fire pumps including periodic overhauling, oiling, and greasing, preventing maintenance and attending as and when necessary for making it leakage free. Regular checks on the system installed and drills as per safety norms.

The Maintenance contract also includes **deployment of one trained Fireman during office hours** from 9:30am to 6:00pm and in case of emergency period at site for maintenance, monitoring & operation of Entire Fire Fighting System installed in Jeevan Deep Building and its campus at Exhibition Road, Patna. **The maintenance contract will also cover Fire Hydrant Systems installed at all floors including common & service areas of the Building.**

2) The following activities are to be performed on regular/weekly/monthly and as and when required and recorded in service report with date and time which shall be counter signed by officers of OS/ Estate/engg Department of the ZO or any other authorized officers. A Log book / register shall be maintained at site for keeping records of the system healthiness, fire mock drill and other relevant information on entire period of Annual Maintenance Contract.

#### A. Diesel Engine Pump:

- Operation & maintenance of Diesel Engine Pump Set.
- Engine & Pump Lubrication. Battery electrolyte top up & Checking of starter.
- Checking & maintaining the alignment of the pump & the Engine.
- Maintaining the pressure switches, pressure gauges, foot & air release valves.

EAST CENTRAL ZONAL OFFICE, PATNA

B. Main Fire Pump:

- Operation & maintenance of Main Fire Pump Set.
- Motor & Pump Lubrication.
- Checking & maintaining the alignment of the pump & the motor, checking.
- Maintaining the pressure switches, pressure gauges, foot & air release valves.

C. Jockey Pressurization Pump:

- Operation & Maintenance of Jockey Pressurization Pump Set.
- Motor & Pump Lubrication..
- Checking & maintaining the alignment of the pump & the motor, checking.
- Maintaining the pressure switches, pressure gauges, foot & air release valves.

D. Main Fire Control Panel: Operating & Maintaining the Fire Control Panel and the various accessories provided such as star-delta starter, fuses/MCBs, timers, selector switch, digital ammeter/ voltmeter, indication lamps, switches etc.

E. On/ Off Switches: Operation & Maintenance of On/ Off Switches provided on each floor for operating the main fire fighting pump, replacing the glasses of switches if broken & checking the complete system wiring.

F. Cast Iron Valves : Operation & maintenance of C.I. body Sluice Valves & Non Return Valves by oiling & greasing the gun-metal working parts, bronze spindle rod & hinge pin & checking the leakage if any and replacing the asbestos gland packing, checking & replacing the rubber insertions/gaskets if needed.

G. Landing Valves: Operation & Maintenance of Double Landing Valves, oiling & greasing the complete valve, checking & replacing the rubber insertions/gaskets if needed.

H. Yard Hydrant Valves: Operation & Maintenance of Single Landing Valves, oiling & greasing the complete valve, checking & replacing the rubber insertions/gaskets if needed.

I. Fire Hose Cabinet: Cleaning & maintaining the fire hose cabinet, replacing the rubber beading & broken glasses, if any.

J. First Aid Hose Reel : Operation & Maintenance of the First-Aid Hose Reel, checking the leakage oiling & greasing of the working/moving parts, shot-off nozzle, gun-metal valve & testing the rubber hose pipe by giving the pressure from the pumps.

K. Sprinkler System: operation & maintenance of sprinkler system i/c piping valves, sprinkler heads, M S angle supports & replacing the broken sprinkler heads, if any. Repairing of risers/water pipe line related to the Fire Fighting System.

EAST CENTRAL ZONAL OFFICE, PATNA

- L. Air Cushion Tank: Operation & maintenance of Air Cushion tank, checking the leakage, air release valve & ball valve pressure gauges etc.
- M. Fire Brigade Inlet: Operation & maintenance of Fire Brigade Inlet, checking the spring loaded NRV, gate valves etc.
- N. Hose Pipes: Maintaining the Fire Hose Pipes & the delivery hose coupling, connecting lugs i/c oiling & greasing etc.
- O. Branch pipe Nozzle: Maintaining the Branch Pipe Nozzle.
- P. **One Trained Fireman shall be deployed at site and will be present all the time from 9:30am to 6:00pm for monitoring & operation of the firefighting system.** The Contractor have to arrange more technicians at site (if required) for system check up/ routine servicing and overhauling preferably on Saturdays/ Sunday/Holidays without disturbing the office work.
- Q. The Fire Man/men should be in Proper uniform ( as per norms by Local Fire Authority) during working hours and having all the safety wears & tools as required and to be provided by the contractor, nothing shall be paid by LIC for this. A Log book / register shall be maintained at site for keeping records of the system healthiness, fire mock drill and other relevant information on entire period of Contract.
- R. Consumables like engine oil, filter, and fuel/diesel, battery shall be reimbursed to contractor on submission of original bill (as per actual with handling charges at the rate of 15%).
- S. Contractor should have his own tools and plants and other safety measures in good working condition for his working staff. No extra payment shall be made for the same and no claim to be given/ paid by LIC on this account and contractor is bound to follow up the same.
- T. Minimum once in a month entire system should be operated by the contractor in presence of LIC's representatives. The operation of the system can be checked at any time on a short notice to contractor. However, the system should be kept ready all the time for operation i.e. for 24x7.
- U. **Once in six month or on instruction by officer in-charge, contractor will conduct mock-drill and no extra payment will be made for the same.**
- V. Additional strength of Firemen to be employed as and when required will be on account of contractor and no extra payment will be made. Any untoward incident or misplacement/ theft of any item are to be reported immediately. Otherwise the contractor shall be held responsible for the same.

EAST CENTRAL ZONAL OFFICE, PATNA

### **General Terms & Conditions:**

- 1) Payment for above AMC will be made on quarterly basis (as per APPENDIX TO THE CONDITIONS OF CONTRACT) after getting proper acknowledgment from the respective officials of department that maintenance is done satisfactorily. Contractor shall depute competent and skilled technician for executing the works.
- 2) Prior confirmation has to be given to concerned LIC office for necessary gate pass etc for entry/exit permissions. Transportation cost shall be in the scope of the contractor.
- 3) Contractor has to give proper authorization of Engineer/Supervisor/technician responsible for maintenance of units and maintain proper record of services rendered.
- 4) In case the AMC is not attended then the penalty will be imposed and any defects cropped up due to non attendance of the AMC will be rectified at the risks and costs of the vendor. This amount shall be recovered from any payments of the contractor lying with LIC.
- 5) Separate service reports are to be maintained for routine service and Break down services. Log book should be maintained.
- 6) After completion of the contract period the agency/contractor has to handover entire System i.e. Fire Alarm, PA & Fire Fighting System in perfect working condition to LIC of India or their authorized representative and after that final bill to be settled.

Agreed and confirmed

Signature of company with seal and date



## BILL FORMAT

**MEASUREMENTS: -** The measurement shall be recorded by Construction Associates (i.e. Contractor) as per prescribed format attached (Annexure A1, Annexure-B, and Annexure-C) and followed the instruction for preparation & submission of measurement sheets & bill as per enclosed Annexure-D herewith for your ready reference. (Refer Clause-21 with all its Sub-clauses of Conditions of Contract of the Tender(Part-I))

[illegible]

**EAST CENTRAL ZONAL OFFICE, PATNA**

[illegible]

**EAST CENTRAL ZONAL OFFICE, PATNA**

|      |                                                                                                                   |
|------|-------------------------------------------------------------------------------------------------------------------|
|      | <b>ABSTRACT SHEET</b>                                                                                             |
|      | A/C R.A. BILL ..... / FINAL BILL                                                                                  |
| i    | Name of the work                                                                                                  |
| ii   | Agreement No & date / Contract Ref:                                                                               |
| iii  | Contract Amount :                                                                                                 |
| iv   | Name of the Construction Associate & address:                                                                     |
| v    | Name, Designation of LIC measurer with Sr. No.<br>:                                                               |
| vi   | Period of measurement :                                                                                           |
| vii  | Name of the Construction Associate's<br>authorised Engineer/s attending measurement.<br>Authorisation letter ref: |
| viii | Date of Submission :                                                                                              |

| (1) | (2) | (3) | (4) | Tender Qty | Qty up to previous Bill | Qty in this Bill | Cumulative Total Qty | Rate in Rs. | Amount in Rs. |
|-----|-----|-----|-----|------------|-------------------------|------------------|----------------------|-------------|---------------|
| (1) | (2) | (3) | (4) | (5)        | (6)                     | (7)              | (8)=(5)+(7)          | (9)         | (10)=(8)X(9)  |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |
|     |     |     |     |            |                         |                  |                      |             |               |

Note: For any inadvertent deviations in Item Description, unit or Rate after importing the file, the original contract document will prevail upon



**EAST CENTRAL ZONAL OFFICE, PATNA**

Date of Submission :

Authorised Signatory of  
Construction Associate  
Name & Designation

EAST CENTRAL ZONAL OFFICE, PATNA

Annexure-D

FLOWCHART OF e-MEASUREMENT PROCESS.

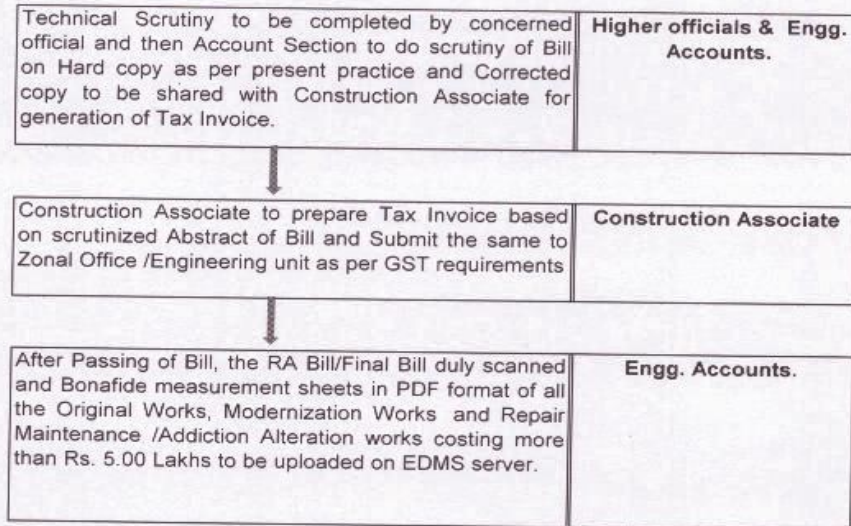
ACTION BY

MASTER  
FOLDER

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| For Each Contract : BOQ in duly protected EXCEL File with full description of Items as per the approved Tender with all amendments to be shared with Construction Associate.                                                                                                                                                                                                                                                                                                    | LIC                    |
| Construction Associate to import item description in measurement sheet from BOQ. He will enter the measurements in e-measurement sheet in EXCEL format. (Annexure -A1&A2) and submit to LIC Site Engineer with Printout.                                                                                                                                                                                                                                                        | Construction Associate |
| LIC Site Engineer to Check 100% measurements submitted by Construction Associate. Test Check to be carried out by Sr officials wherever necessary as per norms. Variation/ correction if any found in the measurements submitted by Construction Associate shall be entered by LIC Site Engineer and a print of such PDF formatted Measurement Sheet will be taken and signed by the LIC Site Engineer, Test Checking Engineer and the Construction Associate on the hard copy. | LIC Site Engr.         |
| Construction Associate to Prepare the Abstract of Bill in EXCEL Sheet taking quantities from PDF formatted measurement sheets and items specifications from BOQ. The Construction Associate to submit Abstract of Bill in EXCEL Format and Printout to LIC Site Engineer along with the corrected measurement sheets.                                                                                                                                                           | Construction Associate |
| After due verification of Abstract Bill , The LIC Site Engineer shall submit the Printout of Abstract Bill, Measurement Sheets duly signed by LIC Site Engineer and Construction Associate, Bill Forwarding note to Zonal Office/ Unit Office for Accounts verification                                                                                                                                                                                                         | LIC Site Engr.         |

*(Handwritten signature)*

EAST CENTRAL ZONAL OFFICE, PATNA



f

EAST CENTRAL ZONAL OFFICE, PATNA

## LIST OF PRINCIPAL / APPROVED MAKES FOR FIRE FIGHTING WORKS

| Sl. No. | ITEM                                                                                     | MAKE                                                                    |
|---------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 1       | FIRE Pumps                                                                               | KIRLOSKAR / CROMPTON GREAVES / CRI                                      |
| 2       | Hydrant (Landing) Valve. Conforming to IS-5290                                           | NEW AGE / EVERS SAFE / MINIMAX / SAFE GUARD                             |
| 3       | Fire delivery hose-IS-636-type-B fitted with delivery hose coupling-conforming to IS-903 | NEW AGE / EVERS SAFE/CRC / JAYSHREE                                     |
| 4       | Short branch pipe universal-conforming to IS-2871                                        | EVERSAFE / VIKING/GE / MINIMAX / NEWAGE / SAFE GUARD                    |
| 5       | Hose cabinet :                                                                           | NEW AGE / EVERS SAFE / MINIMAX / SAFE GUARD                             |
| 6       | Isolation valve                                                                          | KIRLOSKAR / LEADER / ZOOTO / ORIENT                                     |
| 7       | Non-return valve                                                                         | KIRLOSKAR / LEADER / ASHOKA                                             |
| 8       | Fire service inlet                                                                       | EVERSAFE /NEW AGE / MINI MAX / SAFE GUARD                               |
| 9       | First Aid Hose Reel Swinging Type:-                                                      | EVERSAFE / NEW AGE / MINI MAX / SAFE GUARD.                             |
| 11      | Piping                                                                                   | JINDAL / ZENITH / APOLLO / GST / PRAKASH / QST                          |
| 12      | Pressure Gauge                                                                           | H GURU / DWYER / FIEBIG / INDFOS / DANFOSS                              |
| 13      | Butterfly Valve                                                                          | AUDCO / DANFOSS / CASTLE                                                |
| 14      | Fire Alarm Control Panel                                                                 | HONEY WELL / NOTIFIER / MORLEY IAS / MICROM / SECUTRON / CARMEL / ZICOM |
| 15      | Manual call Point                                                                        | HONEY WELL / ZICOM / NOTIFIER / SIMPLEX / MICROM / SECUTRON / CARMEL    |
| 16      | Hooter                                                                                   | HONEY WELL / ZICOM / NOTIFIER / SIMPLEX / MICROM / SECUTRON / CARMEL    |
| 17      | Connecting wire / Cable                                                                  | FINOLEX / HAVELLS / V GUARD / RR CABLES.                                |
| 18      | PVC Conduit                                                                              | AKG / PRECESSION / AVON PLAST / ESSARKE / SUDHAKAR / KALINGA            |
| 19      | Carbon dioxide type portable fire extinguisher                                           | EVERSAFE / FIRESHIELD / MINIMAX / CEASE FIRE                            |
| 20      | ABC type stored pressure portable fire extinguisher                                      | EVERSAFE / FIRESHIELD / MINIMAX / CEASE FIRE                            |
| 21      | Water Co2                                                                                | EVERSAFE / FIRESHIELD / MINIMAX                                         |
| 22      | Amplifier battery backup. With microphone & AUX line.                                    | AHUJA / PHILIPS                                                         |
| 23      | Speaker                                                                                  | AHUJA / PHILIPS                                                         |

**APPROVED MAKES OF MATERIALS FOR ELECTRICAL, FIRE ALARM & STRUCTURAL CABLING WORK**

| SR. NO | MATERIAL                                            | MAKES                |                  |                  |
|--------|-----------------------------------------------------|----------------------|------------------|------------------|
| 1      | COPPER CONDUCTOR PVC INSULATED FR GRADE WIRES       | (a) FINOLEX          | (b) HAVELLS      | © V GUARD        |
|        |                                                     | (d) RRS              |                  |                  |
|        |                                                     |                      |                  |                  |
|        |                                                     |                      |                  |                  |
| 2      | PVC INSULATED ARMOURED CABLES ( LT/HT )             | (a)FINOLEX           | (b) FORT GLOSTER | © CCI            |
|        |                                                     | (d) RR KABLE         | (e) DELTON       |                  |
|        |                                                     |                      |                  |                  |
| 3      | MAIN SWITCH WITH HRC FUSES                          | (a) L & T            | (b)SIEMENS       | © GE             |
|        |                                                     | (d) ENGLISH ELECTRIC | (e) STANDARD     | (f) HAVELLS      |
| 4      | MAIN SWITCHES WITH REWIRABLE FUSE                   | (a) L & T            | (b) CROMPTON     | © STANDARD       |
|        |                                                     | (d) HAVELS           |                  |                  |
|        |                                                     |                      |                  |                  |
| 5      | MCCB                                                | (a) SIEMENS          | (b) L & T        | © SCHNIEDER – MJ |
|        |                                                     | (d) LEGRAND          |                  |                  |
|        |                                                     |                      |                  |                  |
| 6      | MCB / ELCB / ELMCB / DB                             | (a) LEGRAND          | (b) SIEMENS      | © HAGGER         |
|        |                                                     | (d) SCHNEIDER MJ     |                  |                  |
|        |                                                     |                      |                  |                  |
| 7      | CHANGE OVER SWITCH / SWITCH FUSE UNIT UPTO 100 AMP  | (a) HPL              | (b) L & T        | © HAVELLS        |
|        |                                                     | (d) STANDARD         | (e) SIEMENS      |                  |
|        |                                                     |                      |                  |                  |
| 8      | CHANGE OVER SWITCH / SWITCH FUSE UNIT ABOVE 100 AMP | (a) HPL              | (b) L & T        | © SIEMENS        |
|        |                                                     |                      |                  |                  |
| 9      | RISING MAINS                                        | (a) ENGLISH ELECTRIC | (b) GEC          | © SCHNIEDER      |

EAST CENTRAL ZONAL OFFICE, PATNA

| SR. NO. | MATERIAL                                                 | MAKES           |                 |             |
|---------|----------------------------------------------------------|-----------------|-----------------|-------------|
| 10      | PVC CONDUIT ( ISI MARK )                                 | (a) PRECISION   | (b) AVON PLAST  | © ESSARKE   |
|         |                                                          | (d) SUDHAKAR    | (e) KALINGA     | (f) AKG     |
| 11      | PVC CASING CAPING                                        | (a) PRECISION   | (b) KALINGA     | © AKG       |
|         |                                                          | (d) SUDHAKAR    | (e) DIAMOND     |             |
| 12      | M.S. CONDUIT                                             | (a) SUPREME     | (b) BEC         | © NIC       |
|         |                                                          | (d) AKG         |                 |             |
| 13      | FLOOR TRUNKING SYSTEM                                    | (a) LEGRAND     | (b) MK ELECTRIC | © PRECISION |
|         |                                                          | (d) MODI        |                 |             |
| 14      | G.I. PIPE                                                | (a) JINDAL      | (b) SENITH      | © PRAKASH   |
|         |                                                          | (d) TATA        | (e) GST         | (f) APOLLO  |
| 15      | MODULAR SWITCHES, ACCESSORIES & ELECTRONIC REGULATOR     | (a) ANCHOR ROMA | (b) SSK         | © LEADER    |
|         |                                                          | (d) CRABTREE    | (e) MK          |             |
| 16      | NON MODULAR SWITCHES, ACCESSORIES & ELECTRONIC REGULATOR | (a) ANCHOR      | (b) LEADER      | © SSK       |
|         |                                                          | (d) CPL         |                 |             |
| 17      | INDUSTRIAL PLUG & SOCKET                                 | (a) LEGRAND     | (b) HAVELLS     | © CROMPTON  |
|         |                                                          | (d) HAGGER      | (e) STANDARD    |             |
| 18      | CEILING / EXHAUST / WALL FAN                             | (a) USHA        | (b) CROMPTON    | © ORIENT    |
|         |                                                          | (d) BAJAJ       | (e) ALMONARD    |             |
| 19      | INDOOR LIGHT FITTINGS                                    | (a) PHILIPS     | (b) WIPRO       | © CROMPTON  |
|         |                                                          | (d) GE          |                 |             |
| 20      | OUTDOOR LIGHT FITTINGS                                   | (a) PHILIPS     | (b) WIPRO       | © CROMPTON  |
|         |                                                          | (d) GE          | (e) K – LITE    |             |

EAST CENTRAL ZONAL OFFICE, PATNA

| SR. NO. | MATERIAL                 | MAKES                |                 |            |
|---------|--------------------------|----------------------|-----------------|------------|
| 21      | CABLE GLANDS             | (a) COMET            | (b) DOWELLS     | © BRACO    |
|         |                          | (d) SIEMENS          |                 |            |
| 22      | LUGS                     | (a) DOWELLS          | (b) COMET       |            |
| 23      | CONNECTORS               | (a) ELMEX            | (b) CONNECTWELL | © PHOENEX  |
| 24      | FLUORESCENT LAMP         | (a) PHILIPS          | (b) OSRAM       | © CROMPTON |
|         |                          | (d) BAJAJ            | (e) GEC         |            |
| 25      | COMPACT FLUORESCENT LAMP | (a) PHILIPS          | (b) OSRAM       | © HAVELLS  |
|         |                          | (d) WIPRO            |                 |            |
| 26      | MOTOR STARTER            | (a) SIEMENS          | (b) L & T       | © CROMPTON |
| 27      | MONOBLOCK PUMP           | (a) KIRLOSKAR        | (b) CROMPTON    | © CRI      |
| 28      | LIGHTENING ARRESTOR      | (a) PACTIL           | (b) HECO        | © ATLAS    |
|         |                          | (d) G.K. ELECTRICALS |                 |            |
| 29      | TRANSFORMER              |                      |                 |            |
| (i)     | UPTO 500 KVA             | (a) PACTIL           | (b) EMCO        | © CROMPTON |
|         |                          | (d) KIRLOSKAR        | (e) GEC         | (f) TESLA  |
| (ii)    | ABOVE 500 KVA            | (a) KIRLOSKAR        | (b) GEC         |            |
| 30      | A.B. SWITCH & D.O. FUSE  | (a) PACTIL           | (b) JENCO       | © CROMPTON |
|         |                          | (d) ATLAS            |                 |            |
| 31      | SELECTOR SWITCH          | (a) KAYCEE           | (b) SIEMENS     | © C & S    |
| 32      | INDICATING LAMPS         | (a) VAISHNO          | (b) ESSEN       | © PHILIPS  |
|         | CONTACTORS               | (a) SIEMENS          | (b) L & T       | © ABB      |
|         |                          | (d) SCHNIEDER        |                 |            |

EAST CENTRAL ZONAL OFFICE, PATNA

| SR. NO | MATERIAL                                                | MAKES          |                      |                |
|--------|---------------------------------------------------------|----------------|----------------------|----------------|
| 33     | MEASURING INSTRUMENTS                                   | (a) AMP        | (b) MECO             | © AE           |
|        |                                                         | (d) ENERCON    | (e) PROK-DV's        |                |
| 34     | PF IMPROVEMENT CAPACITOR & APFC PANEL                   | (a) EPCOS      | (b) NEPTUNE          | © L & T        |
|        |                                                         | (d) CROMPTON   |                      |                |
| 35     | RELAY FOR AUTOMATIC PF IMPROVEMENT                      | (a) EPCOS      | (b) CONZERVE         | © L & T        |
| 36     | CURRENT TRANSFORMER                                     | (a) AE         | (b) RISHABH          | © KUPPA        |
|        |                                                         | (d) L & T      |                      |                |
| 37     | DATA CABLES & FACTORY MADE PATCH CHORDS                 | (a) LEGRAND    | (b) D LINK           | © FINOLEX      |
|        |                                                         | (d) MOLEX      | (f) AMP              |                |
| 38     | INFORMATION OUTLET / RJ 45 CONNECTORS / RJ – 11 SOCKETS | (a) D LINK     | (b) LEGRAND          | © MOLEX        |
|        |                                                         | (d) SYSTEMAX   | (e) AMP              |                |
| 39     | TELEPHONE WIRES                                         | (a) FINOLEX    | (b) DELTON           | © HAVELLS      |
|        |                                                         | (d) RR KABLE   |                      |                |
| 40     | RG 6 CABLE FOR TV                                       | (a) FINOLEX    | (b) DELTON           | © NATIONAL     |
| 41     | JACK PANEL                                              | (a) D LINK     | (b) LEGRAND          | © MOLEX        |
|        |                                                         | (d) SYSTEMAX   | (e) VALRACK          | (f) AMP        |
| 42     | RACK                                                    | (a) VALRACK    | (b) DIGITRON         | © HCL          |
|        |                                                         | (d) A LINK     |                      |                |
| 43     | FIRE ALARM PANEL                                        | (a) HONEY WELL | (b) CARMEL           | © ZICOM        |
|        |                                                         | (d) NOTIFIER   | (e) MIRCOM/SE CUTRON | (f) MORLEY IAS |

Contractor  
Engineer

100

Chief

|               |                                                       |                   |                     |                     |
|---------------|-------------------------------------------------------|-------------------|---------------------|---------------------|
|               |                                                       |                   |                     |                     |
| <b>SR. NO</b> | <b>MATERIAL</b>                                       | <b>MAKES</b>      |                     |                     |
| 44            | <b>SMOKE / HEAT DETECTOR</b>                          | (a) APOLLO        | (b) MORLEY IAS      | © EDWARD            |
|               |                                                       | (d) SYSTEM SENSOR | (e) HONEY WELL      | (f) MIRCOM/SECUTRON |
|               |                                                       |                   |                     |                     |
| 45            | <b>MANUAL CALL POINT / HOOTER/ RESPONSE INDICATOR</b> | (a) HONEY WELL    | (b) ZICOM           | © NOTIFIER          |
|               |                                                       | (d) SIMPLEX       | (e) MIRCOM/SECUTRON | (f) CARMEL          |

### Note:

All Switch-gear and the Distribution Boards should be clearly marked with Red, Yellow, Blue and Black colour for phases and neutral. All busbar enclosures Angle iron frame and switch-gears should be painted with battleship grey oil paint. Danger and caution boards at appropriate places on main boards and Distribution Boards should be fixed. All controlling main switches on main boards and distribution boards should clearly indicate with white oil paint lettering the floor and section controlled by it. All equivalent alternative materials used on the job will have to be approved by Chief Engineer of LIC before it is actually used. If any item is installed without prior approval, the contractor will be asked to dismantle the installation and use materials as specified. The insulated wire used for concealed wiring shall be with Red, Yellow, Blue colour for respective phases, Black for neutral & Green for earth wires.

### **SPECIAL CONDITIONS REGARDING INSPECTION OF WORK**

#### **1. INSPECTION OF WORK :**

All works in course of execution or after execution in pursuance of the Contract, shall at all times be open to the inspection and supervision of the Executive Director (Bldg.) or his authorized representatives and the Contractor or his responsible agent, duly accredited in writing, shall at all such times, be present to receive writing, shall at all such times, be present to receive instructions/orders. The work during the progress or any time before settlement of the final bill, is also liable to be inspected by Chief Technical Examiner of the Central Vigilance Commission, New Delhi, on behalf of the Employer and this shall be also considered as an inspection by the Employer for all purpose.

#### **2. PRECEDENCE FOR ACCEPTANCE :**

If the contradiction or variance is observed in different components of the tender's the details clearly given in -

- a) "General Preamble" shall have the precedence over the relevant details given in General "Specifications".
- b) "Trade Preambles" shall have the precedence over the relevant details given in "General Specifications"
- c) The description of an item of the "Schedule of Quantities" shall have the precedence over the relevant details given in "General preambles", General "Specification" and "Trade preambles".

### **CERTIFIED**

THAT THE PERCENTAGE RATE IS QUOTED IN THE "PRICE- BID" AFTER ACTUAL VISITING SITE OF WORK AND ACQUAINTING WITH THE NATURE OF WORK & WORKING CONDITION. THAT WE HAVE CAREFULLY STUDIED THE CONDITIONS OF CONTRACT AND SPECIFICATION FOR MATERIAL AND WORKMANSHIP AND WILL ADHERE TO THE SAME.

### **FORFEITURE OF EARNEST MONEY DEPOSIT.**

- 1) If the lowest tender withdraws his tender before the expiry of validity period or before the issue of letter of acceptance whichever is earlier or makes any modification in the terms and conditions of tender which are not acceptable to department, then the department shall, without prejudice to any other right or remedy be at liberty to forfeit 25% of the earnest money and to refund the balance.
- 2) If the contractor fails to furnish the prescribed performance guarantee within the prescribed period or duly approved extended period 50% earnest money will be absolutely forfeited automatically without any notice and the balance 50% will be refunded.
- 3) In case of forfeiture of earnest money as prescribed above, the tenderer shall not be allowed to participate in the tendering process of the work.