#### COIMBATORE SMART CITY LIMITED



TENDER FOR FORMATION OF PLACE MAKING
SITE AT RUKMANI NAGAR,
WARD NO.74, CENTRAL ZONE
IN COIMBATORE CITY UNDER
GREEN SPACE DEVELOPMENTS FOR
COIMBATORE SMART CITY LIMITED (CSCL)

## COIMBATORE SMART CITY LIMITED NOTICE INVITING TENDER (NIT)

#### Tender Notice No: Item No.1 of e-9/Smart City /2017-18 / SCM

This Tender Document is being published by the Coimbatore Smart City Limited, for the Project for "Formation Of Place Making Site At Rukmani Nagar, Ward No.74, Central Zone In Coimbatore City".

Bidder is advised to study this tender document carefully before submitting their proposals in response to the tender notice. Submission of a proposal in response to this notice shall be deemed to have been done after careful study and examination of this document with full understanding of its terms, conditions and implications. This tender document is not transferable.

#### **Important Dates / Information**

1	Downloading of Tender Document	Tender document can be downloaded free of cost from the official website namely www.tntenders.gov.in from 06.12.2017 upto 27.12.2017.
2	Date of Pre-bid Meeting	14.12.2017 at 4.00 PM
3	Place, Due date and time for receipt of tenders	The Managing Director, Coimbatore Smart City Limited, 2 <sup>nd</sup> floor, Jnnurm building, Coimbatore Corporation, Town Hall, Coimbatore-641001. 28.12.2017 upto 3.00 PM
4	Date and time of opening of the Technical bids	28.12.2017 at 4.00 PM
5	Date and time of opening of the Financial bids	To be intimated latter to the Technically qualified bidders.

6	Earnest Money Deposit	Rs. 99,000 /- (Rupees Ninety Nine Thousand Only)
7	Period of Completion	4 Months
8	Bid Validity Period	90 days from the date of opening the bid.

Managing Director, Coimbatore Smart City Limited.

#### COIMBATORE SMART CITY LIMITED

#### **QUALIFICATION CRITERIA**

- 1. The Tender should accompany a **Earnest Money Deposit of Rs.99,000/- (Rupees Ninety Nine Thousands Only)** which should be remitted by way of Demand Draft/FDR/Bank Guarantee drawn in favour of "The Managing Director, Coimbatore Smart City Limited, Coimbatore". The Bid security deposit remitted in any other form will not be accepted and such bids will be summarily rejected.
- 2. The tenderer should be a registered class I contractor and the registration certificate in any Government / Local bodies should be produced.
- 3. The tenderer should have executed single work of similar nature with value not less than 75 lakhs in the preceding "Three" years (2014-2015,2015-2016,2016-2017) for Government / Local bodies in Proof copy of Completion certificate should be enclosed.
- 4. The Tenderer should have an annual minimum financial turnover of not less than 5 crore in any one financial year in the preceding "Three" years (2014-2015, 2015-2016,2016-2017).
- 5. The Tenderer should submit ESI, PF and TNGST registration certificates and also Copy of the Registration certificates to be enclosed.
- 6. The Tenderer should have amount of Rs.100 Lakhs available in his bank account on the date of submission of tender and the unutilized amount of overdraft / Credit facility extended to the tenderer by the Nationalized / Scheduled banks should be enclosed.
- 7. The bidders should have not been Black listed by any state or central Government Agency in India for which A self declaration in form of an undertaking to this effect should be given in Rs.50/-valued India Non-judicial stamp paper duly notarized and should be enclosed along with their tender.
- 8. All the certificates are Notarized has to be enclosed along with technical bid otherwise the tender would be rejected summarily without assigning any reasons.

Managing Director,
Coimbatore Smart City Limited.

#### COIMBATORE SMART CITY LIMITED

#### STANDARD CONTRACT TERMS AND CONDITIONS

- 1. For and on behalf of Coimbatore Smart City Limited e-tenders are invited in the form prescribed for the work mentioned above and will be received by the Managing Director upto **3.00 p.m.** (as per server clock) on **28-12-2017** from the registered contractors in appropriate class. If the said date happens to be a holiday, the tender will be received upto 3.00 p.m. on the next working day.
- 2. Tenders will be opened by the Managing Director or by an officer authorized by the Managing Director for this purpose at 4.00 p.m. On the said date in the presence of such of the tenderers or their authorized representatives as may attend.
- 3. Tenders received after 3.00p.m. (as per server clock) on the date notified for the receipt of tender will not be considered and will be returned to the tenderer unopened.
- 4. Deleted
- 5. Deleted
- 6. 1% of Estimate Amount shall be remitted in Corporation Treasury and the original chellan for EMD (or) in the form of Demand draft payable at Coimbatore in favour of The Managing Director, Coimbatore Smart City Limited.

The **EMD** remitted in any other form will not be accepted. The EMD will not bear any interest. Tenders not accompanied by Earnest Money Deposit will be rejected. The Earnest Money Deposit will be returned to the unsuccessful tenderers, within 15 days from the date of disposal of tender. In the case of successful tenderer, the EMD will be retained and converted as security deposit.

- 7. Where a tenderer is exempted from Payment of EMD/FSD the tenderer shall produce authenticated proof for such exemption.
- 8. The Coimbatore Smart City Limited will not accept letter authorizing the Department to adjust amounts towards EMD/SD out of the dues payable by the Department to the tenderer.
- 9. Deleted
- 10. Deleted
- 11. The tenders may have the option to present the tender directly.

- 12. No representation/appeal of any kind will be allowed against belated receipt of tenders or loss in transit etc.,
- 13. The Contractors registered with Corporation/Other State Boards and Department of Government of Tamil Nadu/ Other State Government. Government of India/ Railways Military Engineering Services in appropriate class for tendering for works are eligible to tender for the work after obtaining standard contract terms and conditions of the Department by remitting Rs.250/- by cash and signing the departmental copy.
- 14. If the tender is made by an individual, it shall be signed by him or his power of attorney in which case a certified copy of the registered power of attorney shall accompany the tender.
- 15. If the tender is made by proprietary concern, it shall be signed by the proprietor with his usual signature and furnish his full name with the full name of firm and its current address or his power of attorney in which case a certified copy of the registered Power of Attorney in which case a Certified copy of the registered Power of Attorney shall accompany the tender.

#### 16. Deleted

- 17. If the tender is made by the limited Company it shall be signed by a duly authorized person holding the power of attorney and a certified copy of the registered Power of Attorney shall accompany the tender. Such limited Company may be required to furnish satisfactory evidence of its existence before the contract is awarded.
- 18. The tenderer shall read carefully the erratum if any, incorporated in the tender documents. At any time prior to the last date and time specified for submission of tender, The Managing Director, CSCL may for any reason, whether at his own initiative or in response to a clarification requested by prospective tenderer, modify the tender documents by the issuance of an Addendum.
- 19. The Addendum will be sent in writing or by Fax or Telegram or E-mail to all prospective tenderers who have purchased the tender documents and will be binding upon them. Prospective tenderers shall promptly acknowledge the receipt thereof by letter to the Corporation Engineer.
- 20. In order to afford prospective tenderers reasonable time to take an Addendum into account in preparing their tenders, The Managing Director, CSCL may at his discretion, extend the last date and time for the submission of tenders.

21. Each tenderer while submitting the tender must send a copy of valid certificate of Income Tax clearance from the appropriate Income Tax authority in the form prescribed therefore.

#### 22. Deleted

- 23. Each tenderer while submitting their tender must also send a copy of certificate of Sales Tax Clearance from the Commercial Tax Department in the form prescribed therefore.
- 24. The tenders received without the certificates as afore mentioned are liable to be rejected.
- 25. The tenderers who are themselves not professionally qualified shall undertake to employ qualified technical personnel at their cost to look after the work. The tenderers shall therefore state in clear terms whether they are professionally qualified or whether they undertake to employ technical staff, with qualifications required by the department (as indicated below) for the work. In case, the successful tenderer is professionally qualified or who has undertaken to employ technical staff, under him he shall see that one of the technically qualified staff is always present at the site of work during working hours personally checking all items of work and paying extra attention to such work which may demand special attention (e.g.) RCC work etc., The scale of qualifications for the employment of technical staff and the rate of penalty for the failure on the part of the contractor to employ the technical staff for the work are as follows:

S1.No.	Value of Contract	Scale and minimum Qualification prescribed for the employment of technical staff	
1	Above Rs.1.00 Lakhs and upto Rs.5.00 Lakhs	One DCE Holder or a retired JE/(Civil) any of the Engineering Department	, , , , , , , , , , , , , , , , , , ,
2	Above Rs.5.00 Lakhs and upto Rs.10.00 Lakhs	One B.E.(Civil) or equivalent Engineering Degree with atleast one year experience or retired Assistant Executive Engineer of any of the Engineering Department	

3	Above Rs.10.00	One B.E.(Civil) or equivalent	Rs.3,000/-
	Lakhs and upto	Engineering Degree with	per month
	Rs.25.00 Lakhs	atleast 3 years experience or	
		retired Assistant Executive	
		Engineer of any of the	
		Engineering Department in	
		addition to one DCE holder	
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4	Above Rs.25.00	One B.E.(Civil) or equivalent	Rs.4,000/-
4	Above Rs.25.00 Lakhs	One B.E.(Civil) or equivalent Degree Holder in Civil	
4		, , ,	
4		Degree Holder in Civil	
4		Degree Holder in Civil Engineering with 3 years	
4		Degree Holder in Civil Engineering with 3 years experience or retired	
4		Degree Holder in Civil Engineering with 3 years experience or retired Assistant Executive	

- 26. The tenderers shall present satisfactory evidence to the SE/CE/EE that they have been regularly engaged in such works they propose to execute and that they are fully prepared with the necessary capital, machinery and materials to begin the work promptly and to conduct it as required by the Tamil Nadu Building practice and the other specifications for the particular work tendered for in the event of their tender being accepted. The tenderer shall furnish details of works on hand which are being executed by him in the Proforma annexed.
- 27. No alteration whatever may be made in the text of the tender documents. Any remarks or explanations shall be set out in a covering letter. The form of agreement furnished so that the tenderers may know what their liabilities and duties are. The tenderer shall sign each and every page of the tender documents issued by the Department and entire documents shall be submitted.
- 28. The rates quoted in the bill of quantities (Schedule A) shall be firm for finished work in site and no variation in the tendered rates is admissible.
- 29. It must be clearly understood that the prices quoted in the tender are to include everything required to be done at site of work according to the conditions of contract and specifications and by the drawing therein referred to and also, all such works are necessary for the proper completion of the contract though special mention thereof may have been omitted in the specification/ drawings.

- 30. The tenderer shall be solely responsible for the payment of all Central or State Government Taxes and levies etc., Rates of works shall remain unaltered by any change that may be made from time to time in the rate at which taxes and levies are payable.
- 31. The rates shall be written both in figures and works legibly, corrections if any shall be made by crossing out, initialing dating and rewriting, overwriting if any shall also be initiated. Where rate is quoted in whole Rupees without any decimal fraction, the word "only" shall be inserted after the rate quoted to prevent any manipulation. For example a rate quoted as "Rupees eight hundred" shall read "Rupees eight hundred only" after the insertion.
- 32. When there is difference in rate quoted by the tenderer in figure and in words, then the rate quoted in words only will be considered. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit prices shall prevail and the total price shall be corrected. The gross total amount of the tender will be finalized accordingly. If the contractor does not accept the correction of the errors, his bid will be rejected.
- 33. The tenders shall be valid for acceptance for a period of 90 days from the date of opening of tenders.
- 34. Attention of the tenderer is drawn to the following declaration which forms part of the letter of tender to be signed by the tenderer. I/We agree that I/We will not withdraw the tender during the period that will be required for intimation of acceptance or non acceptance as stipulated in the notice inviting tender of during such extended period as agreed by me/us, and if I/We do so withdraw, I/We shall forfeit the EMD to the Department, Failure to sign the letter of tender will result in rejection of the tender.
- 35. The tenderer or his/ their authorized agent is expected to be present at the time of opening of tenders. The tender receiving officer will on opening each tender prepare a statement of the attested and unattested correction therein and hand it over to the tenderer concerned and initial all such corrections in the presence of the tenderer. If any tenderer or his/agent is not present at the time then the tender receiving officer will on opening the tender make an entry that the tenderer was absent and attest the corrections himself which the absentee tenderer shall accept without any question whatsoever.

- 36. The acceptance of the tender by the tender accepting authority shall be deemed to result in and constitute a valid and concluded contract binding on the tenderer not withstanding the non execution of the contract agreement.
- 37. In respect of the successful tenderer, the EMD remitted along with the tender shall be converted as Security Deposit. The EMD remitted in any other approved forms by the successful tenderer converted to security deposit and he will be called upon to pay difference between 2% contract value and EMD remitted by the notified that and before signing the contract agreement.
- 38. It is open to the Coimbatore Smart City Limited to insist on a higher security deposit up to a maximum of 10% of the contract value, wherever the Department feels necessary.
- 39. The successful tenderer shall enter into an Agreement in the prescribed form in a non-judicial stamp paper having a face value of not less than Rs.20.00 purchased in his favour at his cost within 15 days after notification of the acceptance of his/their tender. If the successful tenderer fails to execute the agreement within the stipulated time, the work order will be cancelled and EMD forfeited.
- 40. The tenderer shall examine closely the standard contact terms and conditions of Department and the Tamil Nadu Building practice and also other specifications and general conditions of contract contained therein before submitting his/their rates which shall be for finished work it site. He/they shall also carefully study the drawings additional specifications and all the documents connected with the contract.
- 41. Every tenderer is expected before quoting his rates to inspect the site of the proposed work. He shall also inspect the quarries and satisfy himself about the quality and availability of materials. The names of quarries, kilns etc., where from certain materials are to be obtained will be given in the lead statement (Schedule C). In every case the material must comply with the relevant standard specification and only the best class of materials shall be used on the work. No extra charge shall he claimed towards extra lead or for any other reason later on after the acceptance of contract.

- 42. The tenderer shall quote specific rates for each item in the (Schedule A) Bill of quantities. The rates and prices entered in the schedules are to cover all the works and details described in the specifications or shown in the drawings and it is to be distinctly understood that no claim will be entertained which is based on the circumstances that works may be described in the specifications to which apparently no corresponding item is given in the schedules. Tenderer offering a percentage deduction from or increase on the estimate amount and those not submitted in proper form will be rejected, except in case of percentage tender system.
- 43. It shall be definitely understood that the Dept. does not accept any responsibility on the correctness or completeness of the Bill of quantities (Schedule A) accompanying this tender notice and that this Bill of quantities is liable to alteration by omission deductions or additions at the discretion of the Corporation Engineer as set forth in the conditions of contract.
- 44. A tenderer submitting a quotation which the tender accepting authority considers very exorbitant and/or unreasonably low indicative of the tenderer not having understood the implications in the contract or is attempting to frustrate the object of the Department or to exploit the Boards, will render himself liable to be debarred from tendering for such periods the tender accepting authority may decide.
- 45. No part of the contract shall be sublet without the written permission of The Managing Director, CSCL nor shall transfer be made by power of attorney authorizing others to receive payment on the contractor's behalf. In the case of Individual of Proprietary firm or Firm in Partnership or Limited company the holder of Power of Attorney may be allowed to receive the materials, to receive cheques and to participate in the opening of tenders, signing of tenders, agreement duly furnishing the Certified Copy of the registered Power of Attorney and signing acceptance of measurements in M. Books provided that these powers are delegated in the Registered Power of Attorney.
- 46. The tenderer shall ensure the rate of progress as stipulated in (Schedule AA)
- 47. If the contractor fails to undertake to commence the work within 30 days after notification of the acceptance of his/their tender, the EMD/Security Deposit will be forfeited and contract is liable to be cancelled or terminated and The Managing Director, CSCL may thereupon at such times as he may think fit, arrange through any other person or persons to undertake or perform, provide, execute and do all works, materials or matters and things described in the tender schedule at the risk and cost of contractor.

- 48. Tenders shall give in their tender their place of residence and office with full postal address. The delivering at the above named place or posting in a post box regularly maintained by the Post Office Department, or sending letter by registered post for acknowledgement of any notice, letter or other communication to the contractor shall be deemed sufficient service thereof upon the contractor.
- 49. When the value of work put to tender is more than 25 lakhs, the tenderers will be prequalified for offering their tender. The prequalification bids will be given to the eligible contractor (with class and monetary limit) as specified by the department free of cost on the request. The tender schedule will be issued only to the prequalified contractors /firms.
- 50. The Coimbatore Smart City Limited reserves the right to reject all or any of the tenders without assigning any reasons for so doing.
- 51. Tenders submitted by non registered or ineligible contractors will not be considered and will be returned to them unopened.

Managing Director Coimbatore Smart City Limited

#### COIMBATORE SMART CITY LIMITED

### GENERAL CONDITIONS OF CONTRACT DEFINITIONS AND INTERPRETATIONS

- 1. In the contract, as hereinafter denied, the following works and expressions shall have the meanings hereby assigned to them except where the contract otherwise refers.
  - a. "Approved" means approved in writing including subsequent written confirmation of previous verbal and approval in writing as aforesaid.
  - b. The department means the Coimbatore Smart City Limited
  - c. "Contract" means the notice inviting tenders, letter tender, general conditions of contract, specifications, drawings, Bill of quantities showing approximate quantities quoted rates and amount against each item, rate of progress and the contract Agreement.
  - d. "Contractor" means the person or persons, firm or company whose tender has been accepted by the Board and includes the contractor's personal representatives, successors, heirs, executors and administrators, unless exclude by the contract and permitted assignees.
  - e. "Contract Price" means the sum named in the tender subject to such addition thereto or deductions there from as may be made under the provisions of the contract.
  - f. "Constructional Plant" means all appliances or things whatever nature required in or about the execution, completion or maintenance of the works or temporary works (as hereinafter defined) but does not include materials or other things intended to form or forming part of the permanent work or temporary housing, hutting, office, stores, etc.,
  - g. "Drawing" means the drawing referred to in the specifications and any modifications of such drawing approved in writing by the Engineer and such other drawings as may from time to time be furnished or approved in writing by the Engineer.
  - h. "Department" wherever occurring may be deemed to refer to ULB.

- i. "Engineer means Corporation Engineer or any other Engineer appointed from time to time by the department to act as such in connection with these works. Whenever any work is specified to be done or materials supplied to the satisfaction of the Engineer, it shall be taken as including his properly authorized assistants and duly authorized representatives.
- j. "Site" means the land and other places envisaged by the dept where the work or works are to be executed or carried out.
- k. "Specifications" means the standard specifications of TNPWD or Highways and any particular specifications set out for this particular contract. In the absence of any specification issued by the Department, the specifications issued by the Bureau of Indian Standard or sound engineering practice will apply.
- 1. "Temporary Works" means all temporary works of every kind required in or about the execution, completion or maintenance of the work.
- m. "Test" means such test or tests as are prescribed by the specifications or considered necessary by the Engineer.
- n. "Work" means works to be constructed, completed and maintained in accordance with the contract.

#### 2. SINGULAR AND PLURAL

Words importing the singular only also include the plural and vice versa where the contract requires. Words importing persons shall include any incorporated company or a registered association or body of individuals or a firm of partnership.

#### 3. HEADING OR NOTES

The clause headings or marginal notes in this general condition shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof the contract.

#### 4. WORKS COMPRISED IN THE CONTRACT

This contract comprises the execution and completion of the work described or mentioned in there specifications and in the schedules hereto, annexed and shown upon the drawings herein referred to and ill extra work which may be ordered under the herein contained. The drawings, specifications, schedules etc., are to be considered as explanatory of each other and no advantage shall be taken of any omission in any of these documents.

#### 5. DISCREPANCIES

Should any discrepancy appear in any of the documents and drawings included in the contract, or between different parts of the same documents, or any ambiguity or insufficiency of information the contractor shall point out the same to the Engineer in writing and receive his instruction, explanation or Decision in the matter, before quotating the tender.

#### 6. OMISSIONS

In the event of anything reasonably necessary or proper to the due and complete performance of the work (of which the Engineer shall be the sole judge) being omitted to be shown or described in the drawings, specification and schedules, the contractor shall execute and provide at the rates noted in the bill of quantities (Schedule A) all such omitted works and things as if they had been severally shown and described and according to the directions of the Engineer and to his satisfaction.

#### 7. BILL OF QUANTITIES (SCHEDULE-A)

The Contractor shall not be held responsible for the accuracy of the quantities set out in the schedules hereto attached but only for the accuracy of the prices, amount and totals therein appearing. The rate for each item of the work in the schedule shall be inclusive of the costs and charges of all materials, labour, tools and plant necessary for the full and complete execution of the work as described in the specification and schedule unless otherwise specified and for the due fulfillment of all the requirements relating thereto as specified in the contract. If any errors, omission or misstatement shall be discovered in the said quantities the same shall not vitiate the contract or release the contractor from the execution and completion of the whole or any part of the said works or from any of the obligations or liabilities of the contractor under this contract or entitle the contractor to any damages or compensation from the Board.

#### 8. PREPARATION OF CERTIFICATES

In presenting the interim or final certificates of payment of the contractor, the Engineer shall take into account the total quantities of work included in this contract as set out in the priced bills of quantities and should it appear after measurement that these quantities of work have been exceeded, he shall certify the amount so exceeded after getting the deviations approved by competent authority.

#### 9. NET MEASUREMENT

Should the final measurement of the work show that the total quantities of the various works executed are less than those set out in the bills of quantities the Engineer shall in like manner deduct at appropriate quoted rates the value of such difference from the total sum of the contract. The measurements above referred to will be taken and recorded as prescribed in the TNEP (Latest edition).

#### 10. DRAWINGS

The drawings referred to in the contract will be detailed in Schedule-B. They are signed by the Engineer authorized by the Department. The Engineer may issue such further or amended drawings as the shall from time to time think fit and all such drawings signed by him shall be held to be included in this contract. Working drawings will be furnished from time to time by the Engineer to the Contractor. No drawings shall be used by the contractor unless it has been signed by the Engineer.

#### 11. CONTRACT GENERAL EXPLANATION

The works under the contract and every addition, alteration or deviation directed to be executed under the contract or that may be necessary or properly to be done in order to perfect and complete the same shall be executed by the contractor in the best and most substantial and workman like manner, with materials of the best and approved quality of their respective kinds, according to the particular contained in or implied by the specification and schedule attached and the said drawings referred to or such other, additional particulars, explanations and drawings as may be given or approved by the Engineer, and to the 111 and entire satisfactions and directions from time to time given by the Engineer. The Engineer shall have full liberty from time to time and at all times to inspect, examine and test the materials and workmanship and may at any time reject any or all of several purposes they are applied or not in accordance with the said bills of quantities, specifications drawings, instructions or directions.

#### 12. CONTRACTOR'S LIABILITY

The Contractor shall be absolutely and solely responsible for whatever damages may be caused by or result from the execution of the works, whether these may have been carried out skillfully and carefully and strictly in conformity with the provisions of the specification or not. To this end the contractor shall at his expense, shore, sling, project, support, alter, restore and make good all houses, bridges, barns, buildings, drains, culverts, water mains, sewers, electric posts, fences or any other properties or things which may be disturbed or damaged during the execution of the works, shall he fail to do so, the same shall

be carried out by the Engineer and the cost thereof recovered from the contractor. Care shall be taken out to move without the consent of the proper authorities, any pipe, culvert, cable, pole wire, building or other structures. If instructed by the Engineer in writing, permanent supporting works shall be constructed by the contractor, or the position of any existing work shall be changed. Such permanent work that may be ordered in working by the Engineer, if specified by him to be an extra work will be paid for on the valuation fixed by the Engineer.

#### 13. POWER TO VARY WORK

The description of work required to be executed by the contractor are set forth in the specifications, schedules and in the drawings, but the Engineer reserves the power to vary, extended or diminish the quantities of work, to alter the line, level or position of any work to increase, change or decrease the size, quantity, quality, description, character or kind of any work, to order the contractor to execute the works or any part thereof, by day or night work, or to add to or take from the work included in the contract as he may think proper without violating the contract and the contractor shall not have any claim upon the dept for any such variation, extension, diminution, alteration, increase, change or decrease other than for the work actually done, calculated according to the prices tendered and accepted in this contract.

#### 14. EXTRA FOR VARIED WORKS

Any unforeseen additional work that may become necessary and is accordingly carried out under the contract under proper written orders from The Managing Director, CSCL and shall be measured and valued by the Engineer at the rates contained in the contractor's original agreement and if these rates do not apply then prior to execution of the additional work, a rate for such work shall ordinarily be agreed upon and entered in a supplement schedule and signed by both the Engineer and the contractor. If it is not possible to arrive at such an agreement, then the contractor shall be paid according to cost of labour employed and the materials used to which will be added 10(ten) percent to cover the profit on the said work on this delivery of necessary vouchers to the Engineer.

#### 15. NOTICES REG. SHORING ETC.,

In any case in which works of shorting or other works for the protection or security of buildings are necessary, the contractor shall within a reasonable period before the execution of such works serve notices upon the occupiers of the buildings intended to be shored up or otherwise secured and upon all other parties entitled to notice, apprising them respectively that such works are necessary, that the contractor is about to execute the same and will at a time to be specified in such notice, enter upon the premises for the purpose of executing such works.

### 16. CONTRACTOR TO BE RESPONSIBLE FOR ALL TRESPASSES AND DAMAGE

- a. In the event of accident to any persons including employees of the Department on duty, damages to property, trespass on land, injury to animals or damage injury of any description to any person or thing arising out of the execution of the work, the contractor shall be held responsible for and make good the same and shall indemnify the Department from all claims or expenses on account thereof, any if the Department has to pay any money in respect thereof, the sum so paid and the costs incurred by the Department shall be charged to the contractor as so much money paid to him on account of his contract and the contractor shall not be at liberty to dispute or question the right of the Department to make such payment for him or his account, not withstanding the same may have been made without his consent or authority and decision or determination in law or otherwise to the contrary not withstanding.
- b. The Department shall not be liable to for or in respect of any damages or compensation or claim to therefore, under any Act for the time being in force or common law because or by reasons or in consequence of any accident or injuries to workmen or others in employment of the contractor or any sub contractor or of any person acting under him or on his behalf or the staff/persons employed by the department for supervision of the work under his contract and contractor shall save the Department harmless and indemnify in respect thereof and of all costs and expenses incident thereto or consequent thereon.
- c. On the occurrence of accident which results in the death of any of the workman employed by the contractor or which is so serious as likely to result in the death of any such workmen, the contractor shall, within 24 hours of the happening of such accident, intimate in writing to the Engineer the fact of such accident. The Contractor shall indemnify the Department against all loss or damage sustained by the Department resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or fines if any payable by the Department as a consequence of Department failure to give notice under the Workman Compensation Act or otherwise conform to the provisions of the said Act in regard to such accident.

#### 17. ACCESS TO WORK

The Contractor shall ascertain himself of the number and nature of the existing roads, and cart tracks available for access to the site of the work and make due provision in the rate for any difficulty involved in carting materials and surplus excavation.

### 18. CONTRACTOR NOT TO COMMENCE WORK ON PW RATE PROPERLY UNTIL AUTHORISED

The contractor shall not commence any work in or upon under across or through any land, house building, shed, yard, area, roadway, ground, garden or and other place being private property until authorized in writing by the Engineer so to do.

#### 19. TEST

Every part of the works all the materials to be used therein shall be subjected to such tests from time to time during the exaction of the work as the Engineer may direct and the whole of such tests shall in all cases be made at the contractor's sole expenses.

### 20. CONTRACTOR, RESPONSIBLE FOR FINISHED ACCURACY OF WORK

The work will be set out by the Engineer who will give proper lines positions, level, depths and particulars on the ground the contractor providing poles, rails bowing rods, straight edges, struts, pegs. etc., and all labour for fixing the same. The contractor must check and satisfy himself of the accuracy of such setting out and shall be responsible for the same and for the finished accuracy of the work in accordance with the contract. The contractor shall take every care that the pegs or pillars for levels or lines are carefully preserved from disturbances. Should be neglect this precaution the cost of resetting shall be.

### 21. WORKS UNDER THE CONTROL OF THE ENGIENER WHO MAY REJECT MATERIALS

#### OR WORKMANSHIP

The work shall be carried on and completed under the exclusive control, direction and supervision and to the satisfaction of the Engineer. The Engineer shall likewise have full power to reject or condemn any workmanship or materials that he may deem unsuitable. In case of workmanship or materials being rejected by the Engineer, the contractor shall immediately remove and replace the same to the satisfaction of the Engineer, or the Engineer is hereby authorized to remove and replace the same deducting the value of the work rejected or material removed or the cost of replacing the same, as he may think proper, from any amount due or that may become due to contractor.

- a. The contractor shall be responsible for all materials and other articles and things which may be supplied by department from the time he takes delivery thereof and shall use them only for the purposes of this contract and shall make good any loss, breakages, damages, wastage or undue wear and tear that may take place from whatever cause and pay to Department for such loss, damage, wastage or undue wear and tear such sum as the Engineer may determine Engineer may determine.
- b. The contractor shall take insurance for the total cost of the materials involved in the contract. The insurance premium will have to be paid by the contractor.
- c. The contractor shall have an account of all materials and other articles and things that are supplied by the department from time to time and also inform to Engineer place of storing etc., The Engineer is authorized to inspect such stores as and when required.
- d. As and when the Engineer inspects the site of work, the contractor shall produce the materials available at site as on that date. If any shortage is noticed, the Engineer who has actually verified the stores is empowered to recover the cost from the contractor's bills or dues from this or any other work or from security deposit.

#### 23. CONTRACTOR'S SUPERVISION OF WORK

- a. The Contractor shall give or provide all necessary superintendence during execution of the works and as long thereafter as the Engineer may consider necessary. Such superintendence shall be given by suitable person having adequate knowledge of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents) as may be requisite for the satisfactory construction of the works.
- b. The Contractor or a competent and authorized agent or representative approved of in writing by the Engineer (which approval may at any time be withdrawn) is to be constantly on the works and shall give his attention whole time to the superintendence of the same. Such authorized agent or representative shall be in full charge of the works and shall receive on behalf of the contractor directions and instructions from the The Contractor or such authorized agent or representative shall be responsible for the safety of all operations. Such authorized agent/ representative shall on behalf of the

contractor receive and have charge of at the site of the works, all drawing specifications and schedule and of all writings, papers and documents (or copies thereof) which may be delivered to or for the use of the contractor or for his guidance and such authorized agent or representative shall also on behalf of the contractor receive, execute and obey all such instructions, and directions as may be given by the Engineer and he shall not be changed without the consent of the Engineer. Instructions given to such authorized agent or representative shall be considered as having below given to the Contractor.

#### 24. SITE ORDER BOOK

An order book will be kept by the (JE/AE) incharge at the site of the works, orders entered in this book by the Engineer, or any higher authorities shall held to have been formally communicated to the Contractor. The (JE/AE) will sign each order as it is entered and will hand over the duplicate to the Contractor or his agent who shall sign the original in acknowledgement of having received the order or he can acknowledge receipt of orders in the Book itself.

#### 25. LEVELS ETC

The levels and the other particulars shown upon the drawings such as the size and position of existing main, cables, Railway lines, storm water drain etc., are believed to be correct but the contractor must verify the same as well as all other particulars of the contract on the ground and he will he held responsible for the consequence of any error contained therein or omission there from.

#### 26. EXCLUDED MATTER

It is to be distinctly understood that the specifications are to receive their strict literal interpretations and that the works are in all respects to be carried out in accordance with them and the drawings, to the satisfaction of the Engineer. The decision, opinion, certificate or valuation of the Engineer with respect to all or any of the following matters shall be final and without appeal.

- a. The true intent or meaning of drawings
- b. The quality of the work carried out or materials supplied by the contract
- c. Any requirements of the Engineer under clause 29
- d. Measurements recorded in the Measurement book

### 27. CSCL MAY OCCUPY THE SITE AND EMPLOY OTHER CONTRACTORS

The Coimbatore Smart City Limited expressly reserve to themselves the right to occupy for their own purposes of whatever kind at any time and for so long a time as Engineer may be notice in writing to the contractor require any portion of the site of the works, whether the works to be executed thereon be commenced or be in progress or completed and to employ thereon agents and workmen other than the contractor in the execution of any work not the subject of the contract and the contractor shall not obstruct such agents and workmen but without extra charge and with out relief from any liabilities or responsibilities incurred under the contract shall allow and provide them unrestricted access thereto and such facilities as in the judgment of Engineer may by him be reasonably demanded.

#### 28. Deleted.

#### 29. PENALTY FOR SLOW PROGRESS

If the contractor fails to maintain the rate of progress of work as stipulated in clause 28, the Engineer shall have the power to impose as penalty such amount as he may deem fit for every day that the work remains uncommenced or unfinished after the proper date provided however the total amount of penalty imposed during the stipulated period of completion of the work shall not exceed 5% of the contract value.

#### 30. SKILLED WORKMEN TO BE EMPLOYED

Contractor shall employ in and about the execution of the works only such persons as are careful skilled and experienced in their several trades and callings and the Engineer shall be at liberty to object to and request the contractor to remove from the works any person employed by the contractor in or about the execution of the works who in the opinion of the Engineer misconduct himself or incompetent or negligent in the proper performance of his duties and such persons shall not be again employed upon the works without the permission of the Engineer.

#### 31. Deleted.

#### 32. OPENING FOR EXAMINATION

No work shall be covered up until it has been examined by the Engineer and directions given by him to that effect and if the Contractor covers up any work before it has been so examined, he shall uncover the same when required by the Engineer at his expense and shall the Engineer require it for his further satisfaction, the Contractor shall at any period during the continuance of his contract pull down any part of the works and make such opening and to such extent through any part of the said works as the Engineer may direct and the Contractor shall make good the same again to the satisfaction of the Engineer at the Contractor's cost.

#### 33. NIGHT WORK

The works shall without extra charges be carried on day and night without intermission shall there be any cause whatsoever which in the judgment of the Engineer, shall require it but no work shall be carried on in the night or on Sunday's or in other than ordinary working hours without the prior sanction of the Engineer in writing save when the work is unavoidable or absolutely necessary for the sake of life or property or for the safety of the works in which case the contractor shall immediately advise the Engineer.

#### 34. WATCHING AND LIGHTING

The Contractor shall at his expenses provide at the site of works sufficient lighting and watching and fencing by night and by day and shall in every respect conform to the police regulations in these matters and he shall free and relieve the Department, should be neglect to do so the same shall be provided by the Engineer and the cost thereof recovered from the Contractor.

- 35. Deleted.
- 36. Deleted.
- 37. Deleted.
- 38. Deleted

### 39. MATERIALS, IMPLEMENTS AND LABOUR PROVIDED BY THE CONTRACTOR

Except for such materials as are herein stated to be supplied by the Department, the contractor shall at his cost and charges furnish all materials, planks, timber, carts, wagons, trucks, lights, pumps and cranes, iron work and metal work and also all plant, power and labour and everything necessary for the full and complete performance of this contract, including the construction, erection and maintenance of all fences, roadways, paths and bridge ways for the traffic and he shall in like manner furnish lights and watchman and everything necessary for the safety of the public for the protection of properties adjoining the said contract works.

### 40. ENGINEER TO HAVE RIGHT TO INSPECT PLACES FROM WHERE MATERIALS OBTAINED

All places wherein any materials are being made or obtained for the works and the whole of the process connected there with and all the other operations of the contractor or any authorized sub contractor, manufacturer and tradesman shall be open to the inspection and control of the Engineer and all persons authorized by him at all times.

### 41. MATERIALS AND WORKMANSHIP-INFERIOR WORK TO BE RECTIFIED

If any materials brought upon the site or works on to the places where any operation have been or being carried out in connection with or for the purposes of the work be in the judgment of the Engineer are inferior or improper description or improper to be used in the work the said materials or workmanship shall where required by the said officer be removed or amended by the contractor forthwith or within such period or periods as the said officer may direct. In case of each and every breach by the contractor of this clause the Engineer is hereby authorized to remove or cause to be removed the materials and workmanship so objected to or any part thereof, and replace the same with such other materials and workmanship as shall be satisfactory to him at the risk and cost of the contractor and for this purpose the cost certified by the Engineer shall be final.

#### 42. PROCEEDING IN CASE OF DEFECTIVE WORK ON NEGLECT

The provisions of the preceding clause shall also apply in the event of the contractor refusing or neglecting to pull down amend and reconstruct any work which in the opinion of the Engineer, shall have been erected on insecure or insufficient foundation or shall not have been sufficiently secured and protected against immediate and future damage, pressure, action of water or otherwise on being required so to do by the Engineer and within the period directed by him.

### 43. PLANT ETC., NOT TO BE REMOVED WITHOUT ENGINEER'S CONSENT

The plant tools and materials provided by the contractor shall from the time they are brought to the see of the work and during the construction and until the satisfactory completion of the contract become and continue to be property of the Department and the contractor shall not remove the same or and part thereof without the consent in writing of the Engineer.

### 44. CONTRACTOR NOT TO OCCPY LAND ETC., AFTER NOTICE FROM THE ENGINEER

In no case shall the contractor continue to use or occupy or allow to be used or occupy any land or property either for the deposit of materials or plant or for any purpose whatever, after written notice from the Engineer is issued to the contractor at his usual or last known place of business and sent through the post office or other modes of delivery requiring the contractor to remove or cause to be removed all such materials from any such land or property as aforesaid or to give vacant possession of such land or property to the Engineer should any such materials or plant remain upon any such land or property remain occupied or be used after such notice for any purpose whatsoever as aforesaid, then and in every such case and as often as the same shall happen the contractor shall forfeit and on demand pay to the Department charges fixed by the Engineer as and for liquidated and ascertained damages for each and every day during which the said lands or property are so used and occupied as aforesaid from the time such notice has been given.

#### 45. RESPONSIBILITY FOR ACCIDENTS DAMAGES ETC.,

The care of the whole of permanent works until their completion as defined in clause 50 and for the period prescribed in clause 59 and of the whole of the temporary works until their removal shall remain with the contractors who shall be responsible for all accidents or damages from whatever cause arising and chargeable for anything that may be stolen, removed, destroyed and damaged to whomsoever belonging and also for making good all defect and damages to the said works or to any property adjoining or any cause whatever, whether such damage or defects were occasioned by the negligence of the contractor or not or may be or might have been discovered during the progress of the works or in consequence thereof, or shall appear to be known after the completion whereof or whether payment may wholly or partially have been made or the works approved as supposed to have been properly done any no certificate of approval of any works by any officer or members of the Department shall affect or prejudice the right of the Department against the contractor or be considered or held as at all conclusive as to the sufficiency of any works or materials.

#### 46. SCAFFOLDING INSTRUCTIONS

All requisite scaffolding shall be provided at the Contractor's expense and shall be double legged, i.e. it must have two sets of upright supports. Care must be taken to ensure the safety of the work people and the contractor must comply with such instructions as the Engineer may issue to ensure such safety. The contractor will be entirely responsible for any damage or injuries to persons or property resulting from ill erected scaffolding, defective ladders or otherwise arising out of his default in this respect. In this connection the contractor's attention is invited to the PWD safety code prescribed in the TNBP.

47 Deleted.

#### 48. COMPLETED WORKS TO BE DELIVERED THEN AND THERE

Portions of work ordered by the Engineer according the minimum rate of progress referred to in clause 27 above will have to carried out and completed in all respects and delivered to the CSCL in a clean and perfect condition within the period of times mentioned in the said orders laying down such minimum rate of progress.

The contractor shall without recompense claim or demand, delay or suspend the progress of the works any part thereof if and when and so often as required by the Engineer and for such time to times as may in the judgment of the Engineer be necessary for the purpose or advantages of the undertaking and shall whenever directed by the Engineer and upon al needful occasions whether directed or not at the contractor's expense properly cover and secure so much of the work as may be liable to sustain damage from weather or any other cause and shall at all times and forthwith when required properly make good to the satisfaction of the Engineer all damage or injury which such works or any part thereof may have sustained.

### 49. TIME AS THE ESSENCE OF CONTRACT PENALTY FOR NON COMPLETION

Time shall be considered as the essence of this contract on the part of contractor and in case the contractor shall fail in the due performance of the works to be executed under this contract by and at the time herein limited for completion thereof the contractor shall forfeit and on demand pay to the CSCL and for liquidated damages not by way of the penalty a sum not exceeding 1/4 (one fourth of hundred percent) value of the work for each and every day which may lapse between the extended and actual dates of completion and stipulated date of completion subject to maximum of five percent of the value of the work such payment shall not in any degree release the contractor from any further or other obligations and liabilities under this contractor or from the complete execution and performance of this contract.

# 50. DELIVERY WHEN PROVISIONAL AND WHEN COMPLETE CERTIFICATEOF COMPLETE EXECUTION OF WORKS BY DEPARTMENT DURING CONTINUANCE OF CONTRACT

The completion and delivery at the time referred to in clause 48 or at subsequent time shall be deemed to be completion and delivery only if the Engineer shall accept the same and when so accepted shall not be deemed a full complete and sufficient completion and delivery of the said works by the contractor to the CSCL unless and until a certificate in writing called a certificate of completion under the hand of the Engineer shall have been given to the effect that all the works contracted for and directed to be executed have been completed and are in a sound water-

tight, workman like and complete and usable condition and that the contractor has in the opinion of the Engineer reasonably fulfilled and completed his contract and undertaking, except so far as it relates to the maintenance of the works as hereinafter provided. Provided always and notwithstanding anything contained in the contract, it shall be lawful for the Department to undertake and execute either departmentally or through other parties at any period during the continuance of this contract any kind of work matter or thing whatsoever which they may consider necessary or proper to be performed and executed for the purpose of and in connection with any or all of the works under this contract and that without in any way relieving the contractor from any of his liabilities and responsibilities under this contract or in any way vitiating or voiding this contract.

#### 51. RECOVERY OF MONEY PAYABLE TO DEPARTMENT ETC.,

All losses, costs, damages and expenses and other money payable to the CSCL by the contractor under any stipulation in the contract may be retained out of any money then due to contractor or which may subsequently become due from the Department to the contractor under any contract. If this amount shall be insufficient to pay such losses, costs, damages it shall be lawful for the Engineer without any further consent on the part of the contractor to sell and dispose of any or all of the Government, promissory notes or securities deposited with the CSCL by the contractor and out the proceeds of such sale after payment of all expenses connected therewith pay to the CSCL all such losses, costs, damages and expenses. If still the available amount shall be insufficient for such purpose then and in that case, it shall be lawful for the CSCL to recover the residue thereof if necessary by legal proceedings and or by resorting the Revenue Recovery Act against the Contractor.

### 52. CSCL MAY TERMINATE THE CONTRACT IN CASE OF INSOLVENCEY OF WANT OR DUE DILIGENCE

a. Should the contractor during the continuance of the contract die or become bankrupt or insolvent or go into liquidation or shall suspend payment or compound with his creditors or from any other cause whatever become unable or fail to carry on the contract with efficiency or unable to not progress with any portion of the work assigned to him in the programme given by the Engineer from time to time in the manner intended by the contract or his preparations for commencement and his subsequent rate of progress be slow from any cause whatever that in the opinion of the Engineer or his representative he shall be unable to complete the work by the expiration of the specified period or shall he refuse or neglect to comply with the directions given to him by the

Engineer or his representative or in any other respect any contrary to the terms of the contract the CSCL shall have power to declare the contract as an end in which case the contractor or person shall only be entitled to receive and give discharge for the payment for such portion of the work as shall have been actually delivered in a serviceable condition at the date of such declaration after due deduction of any sum that may be leviable under the contract.

b. The contractor shall in addition be liable to pay to the Department or the Department at their option shall be entitled to further deduct the amount of all losses, damages or expenses including any excess between the contract price of the works to be done under this contract or such portions thereof as may not have been delivered at the date of such declaration as aforesaid and the price which the Department may have to pay for the similar work provided in lieu of such portion as may not have been so delivered which the Department may be put to or sustain by reason of or in consequence of the Contractor's breach of contract. The above liability shall be in addition to forfeiture of the retention money and the security deposit specified in Clause 55 hereunder.

When a contractor become insolvent/Company winding up/ Contractor dies the loss should be recovered from the bill or any amount due to be paid to him.

#### 53. MEASUREMENT OF WORK

The work will be measured by the JE/AE. The Contractor will be a liberty to accompany them in order that they may agree on the measurements but shall be neglect to do so, the measurements as recorded by the said officers shall be taken as final and conclusive. The measurements of works will be recorded as prescribed in the TNBP and as amended from time to time.

#### 54. CERTIFICATES

So long as he is satisfied with the rate of progress of the works and with the manner in which they are being carried out the Engineer shall subject to the provisions herein contained certify each month payments on account based on the actual quantity and description of the finished works executed by the contractor calculated according to the prices in the schedules hereto attached and measured in accordance with the provision contained herein and the final certificate will be issued only for work which has been completely finished, tested and passed as satisfactory.

#### 55. PAYMENTS AND RETENTION

- a. Retention money or withheld amount from each running bill will be at 5% of contract value. Under the certificate to be issued by the Engineer on the completion of entire work the contractor will receive the final payment of all the moneys due or payable to him under or by virtue of contract except security deposit and the retention amount equal to 5% of the total value of work done provided there is no recovery from or forfeiture by the contractor to be made. The amount withheld from the final bill will be retained under "Deposits" and paid to the contractor together with security deposit after six months reckoned from the date of completion of work or as soon after the expiration of such period of six months as all defects shall have made good according to true intend and meaning hereof whichever shall last happen. In the event the final bill remains unpaid even after the period of six months aforesaid the Engineer shall refund the security deposit and also the withheld amount on a separate bill if requested for by the Contractor in writing. No certificate of Engineer shall be considered conclusive evidence as to the sufficiency of any work or materials nor shall it relieve the contractor from his liability to make good defects as provided by the contract. The Contractor when applying for a certificate shall prepare a sufficient detailed bill based on the original figures of quantities and rates in the contract schedule detailed bill based on the original figures of quantities and rates in the contract schedule to the satisfaction of the Engineer to enable the Engineer to check the claims mentioned in the application as are allowed by the Engineer shall be issued within 14 days of the application. In the case of rods works the security deposit and retention money will be released 12 months after completion of work.
- b. Income Tax shall be deducted at two percent of the gross amount of each bill or at the ruling rates fixed by the Government of India from time to time.
- c. In the event of the death or insanity or insolvency or imprisonment of the contractor or where the contractor being a partnership firm becomes dissolved or being a CSCL goes into liquidation voluntary or otherwise the contractor may at the option of the The Managing Director, CSCL be terminated by notice in writing posted at the site of the works and all accepted and acceptable works shall forthwith be measured up and paid for at the rtes provided in the contract schedule where such apply or otherwise by the most recent schedule of rate approved by the competent authority to the person or person entitled to receive and give a discharge for the payment.

#### 56. LIMITATION OF CERTIFICATES

No Certificate made by the Engineer or other person appointed as aforesaid upon any bill submitted by the contractor shall be taken or deemed as certifying that the contractor has duly executed his contract or any portion thereof and no certificate thereof shall relieve the contractor of any obligation he would have been under in the absence of such certificates but the certificate given by the Engineer or other officer aforesaid shall be deemed to mean no more than that at the time such certificate is given the Engineer or other than temporary work in respect of which the department might pay the sum stated in such certificate. No payment or certificate shall protect or be deemed to protect the contractor in case of over payment or in case it shall at any time appear that the works or any part of them have not been executed in accordance with this contract.

#### 57. TIME FOR COMPLETION OF WORKS

The contractor shall complete and deliver to the Department the whole of the works comprised in this contract and shall complete the removal of all temporary works plant and surplus materials within the stipulated period from the date of handing over of site. The whole of the works shall be delivered complete in every respect in a clean and perfect condition. Provided always that if by reason of the non possession of any site or sites required for the purpose of undertaking the work or the non supply of materials which the department has undertaken to supply for the work or enlargements of the work (which additions or enlargements the Engineer is hereby authorized to make) or for any other just cause arising with the said Department or in consequence of any unusual inclemency of the weather or general or local strikes or for want of deficiency of any orders, drawings or directions or by reason of any difficult, impediments, obstructions, oppositions, doubts, disputes differences whatsoever and howsoever occasioned, the contractor shall in the opinion of the Engineer (whose decision shall be final) have been unduly delayed or impeded in completion of this contract, it shall be lawful for the Engineer to grant from time to time and at any time or times by writing under his hand such extension of time either prospectively or retrospectively and to assign such other day or days for completion without thereby prejudicing or in any manner or affecting the validity of the contract or the adequacy of the contract price or the adequacy of the sum or prices mentioned in the schedules and any and every such extension of time shall be deemed to be in full compensation and satisfaction for and in respect of any and every actual or probable loss of injury sustained or sustainable by the contractor in the premises and shall not entitle him to claim or demand Department for and in respect of the delay occasioned by the cause or causes in respect of which any and every such extension of time shall have been granted.

#### 58. FINAL CERTIFICATE

When the works of this contract are completed the contractor shall submit a demand that the Engineer shall make a final measurement of the works and take over the whole of the works on behalf of the Department and issue a final certificate to enable him to submit a final bill for payment. The Engineer shall thereupon unless he shows reasons in writing to the contrary, make a final measurement of the works and take them over on behalf of the Department and sign a certificate purporting to be a last certificate. Nothing in this clause or in the agreement shall prohibit the Department taking over and using any portion of the works which may be completed prior to the completion of the whole works of this contract.

#### 59. DEFECTS OR FAULTS APPEARING WITHIN DEFECT LIABILITY

Not withstanding any certificates issued by the Engineer under clause 54 and Clause 58 any defect, shrinkage or other faults whatsoever which may appear.

- a. In respect of original civil works within 6 months and
- b. In respect of roads, electrical, mechanical and pile laying works within one year from the completion of the respective woks and the grant of final certificate and arising out of defective or improper materials or workmanship upon the direction of the Engineer to be amended and made good by the contractor at his cost within 15 days and in case of default, the Engineer may cause such work to be executed or may take any measure or to do anything which may in his opinion be necessary for rectifying the defect or fault in the works and the cost of so doing shall be recoverable from the contractor.

#### 60. PERIOD OF LIABILITY

The contractor notwithstanding such execution of works, matters and things as lastly provided and any act, matters and things done, permitted, happening or suffered in pursuance of during the continuance of this contract as lastly provided shall be responsible for and shall effectively maintain and uphold in good, substantial, sound, perfect and water tight condition all and every part of the said works for a period of,

- a. Six months in respect of original civil works and
- b. Twelve months in respect of electrical, mechanical and pipe laying works and roads from and after the date of such last mentioned certificate of completion and shall pay and make good to the Department and all other persons or parties legally entitled thereto

all losses, damages, costs and expenses they incur or in consequence of the operations of the Contractor or of the failure from whatever causes of the works or any of them during the time the contractor is responsible there for and shall indemnify and keep indemnified the Department and other persons or parties as aforesaid from the against the same and from and against all actions, suits, claims and demands whatsoever by reasons or on account thereof or the Department may deduct and retain or pay to such other persons or parties entitled as aforesaid the amount of such losses, damages, costs or expenses out of any amount in the hands of the Department or occurring or due to the contractor. If any portion or portions of the work are found to be defective during the period of liability and repaired as stated in clause 59 above, the period of liability for that portion of the work which has been so repaired shall be extended to a further period of (a) six months in respect of original civil works and (b) Twelve months in respect of electrical, mechanical and pipe laying works roads from the date of completion of the repairs.

#### 61. PAYMENT OUT OF PUBLIC FUNDS

The payments to the contractor shall be made out of the funds under the control of the Department in their public capacity and no member or officer of the Department shall be personally responsible to the contractor.

#### 62. SUBLETTING TRANSFERRING OR ASSIGNING CONTRACT

The contractor shall not sub let the whole of the works except where otherwise provided in the contract. The contractors shall not sublet any part of the works without the written consent of the Engineer and such consent if given shall not relieve the contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any sub contractor, his agents, servants or workman as fully as if they were the acts, defaults or neglects of the contractor, his agents, servants or workman as fully as if they were the acts, defaults or neglects of the contractor, his agents, servants or workmen as fully as if they were the acts, his agents, servants or workmen. Provided always that the provision of labour on a piece work basis shall not be deemed to be a sub letting under this clause. In the case of individual or Proprietary Firm or Firm in Partnership or Limited Company, the holder of Power of Attorney may be allowed to receive the materials to receive cheques and to participate in the opening of tenders, signing of tenders. Agreement duly furnishing the certificate copy of the registered Power of Attorney and signing acceptance of measurements in Measurement Books provided that these powers are delegated in the registered Power of Attorney.

#### 63. PROTECTION AGAINST CLAIMS FOR THE USE OF PATENTS

All fees for any patented invention articles or arrangements that may be used upon or in any manner connected with the construction, erection and maintenance of the works or any part thereof embraced in these specifications, shall be included in the price mentioned in the bills of quantities and the Contractor shall protect and hold harmless the Department against any and all demand for such fees or claims and before the final payment and settlement is made on account of this contract the Contractor if required must furnish acceptable proof of a proper and satisfactory release from all such claims.

#### 64. OLD CURIOSITIES

All old curiosities, relics, coin, minerals etc., found in excavating or pulling down, shall be the property of the Department and be handed over to the Engineer. Should any ancient masonry or other old work of interest be opened up, the Engineer's attention shall be called to the same before demolition or removal.

#### 65. ARBITRATION

- i. If the contractor claims that the decisions or the instructions of The Managing Director, CSCL are unjustified and that accordingly, he is entitled to extra payments on account thereof he shall forthwith notify this to The Managing Director, CSCL to records his decisions and reasons there for in writing and shall within two weeks state his claims in writing to The Managing Director, CSCL thereafter. The Managing Director, CSCL shall thereafter within four weeks of the receipt of the claim reply to the points raised in the claim. Unless resolved by negotiation or discussion immediately thereafter within further four weeks the question of liability for such payment will be treated as a dispute.
- ii. In the contract whenever there is a direction or exercise of will by the Engineer/Department during the progress of the work the mode or manner of the exercise of discretion shall not be a matter for arbitration.
- iii. The decision of Engineer/Department shall be final and binding on all parties to the contract upon all questions relating to the meaning of specifications, designs, drawings and instructions and to the quality of workmanship of materials used on the work or any matter arising out of or relating to the specifications, designs and drawings and instructions concerning the works or the erection of or failure to execute the same arising during the course of works. The above shall not be subject manner of arbitration and in no case shall the work be stopped consequent on such a dispute arising and the work shall also be carried out by the contractor in accordance with the instructions Engineer/Department

- iv. In case any question, difference or dispute shall arise on matters other than sub clauses (ii) and (iii) above and except any of the "excluded matters" mentioned in clause 26 touching the construction of any clause herein contained on the rights, duties and liabilities of the parties hereto or any other way touching or arising out of these presents, the same shall.
- v. In case where the total value of the claims, under the contract is less than Rs.50,000/- be referred to the interpretation decision and award of a Superintending Engineer of the Department as the sole Arbitrator whose decision shall be final and binding on the parties to the contract.
- vi. In case where the value of the claims is more than Rs.50,000/- the parties will seek remedy through the competent Civil Court having local jurisdiction.
- vii. The provisions of the Indian Arbitration and Reconciliation Act 1998 and the Rules there under and any statutory, modification thereof shall be deemed to apply to such references and deemed to be incorporation in the contract. The Arbitrator shall state the reasons for the award.
- viii. Provided always the contractor shall not except with the consent in writing of the Engineer, in any way delay carrying out of works in any such matter question or dispute being referred to Arbitration but shall proceed with the works will all due diligence and shall until the decision of the Engineer/ Department and no awards of the Arbitrator competent civil court shall relieve the contractor of his obligations to adhere strictly to the instructions of the Engineer/Department with regard or the actual carrying out of the works.

#### 66. CONTRACTOR'S RISK AND INSURANCE

The work executed by the contractor under the contract shall be maintained at contractor's risk until the work is taken over by the Engineer. The contractor shall accordingly arrangement his own insurance, against fire and other usual risk during such period which includes natural calamities such as floods, or any other acts of God and no claim by the contractor for the above mentioned will be entertained by Department at any stage. The contractor shall also take Personal Accident Insurance Policy in favour of each worker employed by him in any job pertaining to this contract. He may also ensure the similar personal accident insurance policy available in the market is taken in

respect of each workmen employed by his sub contractor. If the contactor fails to take out the Personal Accident Insurance Policy available in the market as above and accident occurs, an amount equivalent to the compensation payable to the personnel will be deducted from the bills payable to the contractor for the work done or form any other work in Department and kept in deposit account for being paid ultimately to the injured person or to the heirs in case of death.

### 67. CONTRACTOR RESPONSIBLE FOR THE PROVISION OF HEALTH AND SANITARY ARRANGEMENTS FOR THE WORKERS EMPLOYED

The Contractor shall provide at his own expense first aid appliances and medicines including an adequate supply of sterilized dressing and sterilized cotton wool kept in good order under the charge of a responsible person who shall be readily available during working hours. Water of good quality fit for the drinking purposes shall be provided for the work people on a scale of not less than 15 litres per head per day. Every water supply storage shall be at a distance of not less than 15 metres from any latrine, drain or other source of pollution.

Where water has to be drawn from any existing well which is within such proximity of latrine, drain or other sources pollution, the well shall be properly chlorinated before water is drawn from it for drinking. Adequate washing and bathing places shall be provided separately for men and women and such places shall be kept in clean and drained conditions. Latrines and urinals shall be provided with the precincts of the work place and the accommodation separately for each of them shall be at the rate of 2 seats upto 50 persons, 3 seats above 50 persons but not exceeding 100 persons and 3 seats for every additional 100 persons. The contractor shall employ adequate number of scavengers and conservancy staff to maintain the latrines and urinals in a clean condition. Two sheds one for meals and the other for rest shall be provided separately for the use of men and women workers. Crèches shall be provided according to the number of workmen workers and properly maintained. All these amenities shall be provided at the contractor's own expenses besides providing sheds for his workmen.

#### 68. TECHNICAL AUDIT CLAUSE

It is a term of this contract that department shall have the right to carry out post payment audit and technical audit by the Engineers of technical audit cell located in Managing Directorate of Corporation Administration of elsewhere. The technical audit officer shall have the powers to inspect the work or supply, examine running account bills, final bills and other vouchers, measurement books, test reports and other documents either during progress of work or after completion of same and order recoveries from the contractor of recorded reasons even

though he might have been paid earlier. These recoveries are enforceable against the contractor from any amount due to him or security deposits or withheld amounts or any amounts due to contractor of may become due to him from the department on any other work or supply.

#### 69. ADJUDICATOR

The Employer proposes that (Name of proposed Adjudicator) be appointed as Adjudicator under the contract at a daily fee of Rs. Plus boarding, lodging, travelling expenses at actual. If the Bidder disagrees with this proposal, the Bidder should so state in the Bid.

70. MILESTONE DATES:

S1.	Description	Period from start date
No.	of Works	Milestone-I (Four months)
	01 11 01 11	11210000110 1 (2 0011 1220110110)
1	All Works	100 %

- 1. The start shall be within 7 days from the date of issue of Notice to proceed with the work.
- 2. The Intended Completion Date for the whole of the Construction of works is months.
- 3. Description of Milestones.
- 4. The contractor shall submit a revised program for the works within 7 days of delivery of Letter of Acceptance.
- 5. The site possession date shall be within 7 days from the issue of notice to proceed with the works.
- 6. The site is as defined in the Index Plan
- 7. The defects Liability Period is

#### 71. NEGOTIATION

Negotiation of rates will be made only with the lowest tenderer for reducing the quoted rates.

#### 72. WHOM TO CONTACT

The Managing Director, Coimbatore Smart City Limited may be contacted for further information in the matter.

73. The tenders Where the Quoted rates are more than 5% of below the estimate value, additional deposit should be collected invariably, for such cases, the additional deposit (cash only) will be double the amount of value of less percentage of estimate value.

Managing Director Coimbatore Smart City Limited

#### COIMBATORE SMART CITY LIMITED

#### SPECIFICATION FOR MATERIALS

All material required for the works shall be procured and supplied by the contractor himself. The material shall be of good quality and conforming to relevant BIS. The material which are classified for ISI marking should be supplied with ISI marking only.

#### 1.Cement

- 1.1 The entire quantity of cement an steel required for the work will be procured by the contractor. The contractor is responsible for all transport and storage of the material and shall bear all related cost. The employer shall be entitled at any reasonable time to examine the cement and steel supplied by the contractor.
- 1.2 The cement procured by the contractor shall comply with the requirements of IS 269/1976 with the latest revision thereof for ordinary Portland cement and IS 3112/1989 with the latest revision thereof for 43 grade ordinary Portland cement. It shall be of the best normal setting quality unless specially rapid hardening or quick setting quality if expressly instructed by the Engineer to be supplied. Each bag shall bear ISI certification mark and as per specification no.10. of TNBP volume I.
- 1.3 The steel bars shall comply with the requirements set fort in the IS 432 part I, IS 1139, IS 1786 as t eh case may be with the latest revision thereof and the test as described for ultimate tensile strength bond test and elongation test.

All reinforcing steel shall be clean and free from oil, grease, loose scales or rust or other coatings of any character which would reduce or destroy the bend. Each bundle containing the bars shall bear the ISI certification mark.

1.4 All cement / steel shall be tested in nearby laboratories of Polytechnic, or engineering college by the Employer. Two samples should be taken by the Engineer in charge in the presence of the contractor or his authorized representatives or the technical personnel employed by the contractor as in the agreement. The contractor shall without extra cost provide samples and cooperate in the testing of the cement/steel. One sample shall be got tested and the other sample shall be retained by making clear identification in the sample by the Engineer in charge so as to identify at a later date. The cost of such test shall be borne by the contractor.

- 1.5 All cement shall be procured in bags and shall be stored in a dry place for which the contractor shall be responsible. Consignment of bagged cement shall be properly stacked in a manner which will permit easy access for inspection and definite identification. Cement shall be used in approximately in the chronological order in which it is received, but cement that has been stored for a period longer than 4 months from the date of initial sampling shall not be used unless it has been retested at the expenses of the contractor and passed by the Engineer in charge as good quality on the retest. Cement aged more than 180 days from the date of initial sampling shall be rejected.
- 1.6 Cement which has become caked or perished shall on non account be used on the works and shall be rejected. Although the engineer may have passed any consignment, he shall however have the power at the subsequent time to reject such consignment if he finds that any deterioration in the quality thereon has taken place.
- 1.7 A record of the quantity of cement/steel procured with the name of dealer till number and date shall be maintained by the contractor. This should be produced for examination by the Engineer in charge at any time. The age of the cement shall be reckoned from the date of manufacture and it shall be verified by the Engineer in charge.
- 1.8 The rejected consignment of cement and steel should be removed from the site within two days.

The water used in making and curing of concrete, mortar and grout shall be free from objectionable quantities of silt, organic matter, injurious amounts of oils, acids, salts, and other impurities etc., as per I.S. specification No.456-1978.

The Engineer-in-Charge will determine whether or not such quantities of impurities are objectionable.

Such determination will usually be made by comparison of compressive strength, water requirement, time of set and other properties of concrete made with distilled or very clean water and concrete made with the water proposed for use. Permissible limits for solids when tested in accordance with I.S. 3025-1964 shall be as tabulated below.

# Permissible limit for Solids:

Maximum permissible limit

1.	Organic	200 mg/litre
2.	Inorganic	3000 mg/litre
3.	Sulphates (as SO4)	500 mg/litre
4.	Chlorides (as CL)	2000 mg/litre for plain concrete work
		&
		1000 mg/litre for R.C.C. work
5.	Suspended matter	2000 mg/litre

If any water to be used in concrete, mortar or grout is suspected by the Engineer-in-Charge of exceeding the permissible limits of solids, samples of water will be obtained and tested by the Engineer-in-Charge in accordance with I.S. 3025-1964.

#### **BRICKS**:

#### Manufacture:

Common burnt clay building bricks shall conform to the requirements of IS 1077 and shall be of quality not less than class 50 with moisture absorption rate not exceeding 15% as defined in IS: 1077. The bricks shall be chamber burnt and shall not be damaged in any manner and sizes shall conform to the works sizes specified with tolerates as given in 6.2 of IS: 1077.

## Samples:

The Contractor shall deliver samples of each type of brick to the Engineer, and no orders shall be placed without the written approval of the Engineer. All the bricks used in the works shall be of the same standard as the approved samples. The samples shall be preserved on site, and subsequent deliveries shall be checked for uniformity of shape, colour and texture against the samples. If in the opinion of the Engineer any deliveries vary from the standard of the samples, such bricks shall be rejected and removed from the site.

# Uniformity:

The bricks selected for exposed pointed brickwork walls shall be of uniform colour, deep cherry red or copper colour and uniform texture. Only such bricks as are permitted by the Engineer shall be used.

#### Testing:

Samples of the bricks shall be tested in accordance with IS: 3495 by the contractor for compliance with the aforesaid, before any order is placed and soon after receipt of a consignment. Tests shall be carried out as and when required by the Engineer on samples selected by the Engineer's representative.

# Laying:

Brickwork shall be uniformly bedded, bricks being laid upwards. Each brick shall be floated and rubbed in upon such sufficient quantity of mortar that the mortar is squeezed up into the joints, but if such joints are not filled with mortar by this process they shall be flushed up with the mortar from the next succeeding bed. The courses shall be laid truly and strictly to line and horizontal level.

#### Bond:

Brickwork courses shall be alternatively laid in stretcher bond and header bond. Damaged bricks shall not be used. The greatest care shall be taken to prevent mortar dropping on to or in any other way disfiguring or discolouring the bricks and all edges and sides shall be kept strictly plumb and square, in-line and flush with the required finished face. As the work proceeds, it shall be continuously checked with a 2m long straight edge and spirit level.

#### Construction:

Walls shall be carried up in uniform manner and no one portion raised more than 1m above another at any one time, the open end being racked out. Over-hang work shall in no case be permitted. Brickwork shall be cleaned down after each day's work and newly laid brickwork shall be protected by suitable means.

## Dry weather:

In dry weather the suction rate of clay bricks shall be adjusted by wetting as necessary before use. Bricks shall be stored in a free draining area and protected from rain.

#### Lintels:

Where brickwork rests upon lintels or supporting ribs of concrete, the bricks shall be cut as necessary and carefully bedded so that proper support to the outer leaf of brickwork is obtained.

# Pointing:

At the time of laying, all joint of exposed brickwork shall normally be raked out neatly and pointed to 15mm depth.

# Approval:

All workmanship shall be strictly in accordance with the foregoing. The Engineer or the Engineer's representative reserves the right to reject any of the work ongrounds of shabby workmanship. Such rejected work shall be removed and rebuilt to the Engineer's satisfaction.

## **MORTAR**

The cement mortar to be used on the work should be generally conform to specification No.13 of TNBP. Only sufficient mortar shall be mixed as required for immediate use. Partly set mortar shall not be used.

# Preparation of Mortar:

Unless otherwise specified, the cement mortar used in Masonry works shall be cement mortar mix MM5 (1:5) grade using minimum 288 Kgs. of cement per cubic metre of mortar.

Mixing shall be done thoroughly preferably in a mechanical mixer. In such cases, the cement and sand in the specified proportions shall be mixed dry thoroughly in the mixer operated manually or by power.

Water shall be added gradually and wet mixing continued atleast for 3 minutes. Water should not be more than that required for bringing the mortar to the required working consistency of 90 to 130 milli meteres as required in clause 9.11 of I.S. 2250-1981. The mix shall be clean and free from injurious kind of soil, acid, alkali, organic matter or deleterious substances.

### Time of use of Cement Mortar:

Cement mortar shall be used as soon as possible after mixing and before it has begun to set, within 30 minutes after the water is added to the dry mixture.

Mortar unused for more than 30 minutes should not be used and shall be removed from the site of work. The cost of such wasted mortar shall be borne by the bidder. The use of retempered mortar will not be permitted to be used for the masonry.

#### Tests of Mortar:

Mortar Test cubes shall be cast for the mortar used on the work and shall be tested in accordance with Appendix-A of I.S.2250-1965 code of practice for preparation and use of Masonry Mortars. Such cubes shall develop a compressive strength of atleast 50 Kgs/squre centimetre for MM5 (1:5) Grade cement mortar mix, 75 Kgs/square centimetre for MM 7.5 (1:4) grade cement mortar mix and 30 Kgs/ square centimetre for MM-3 grade cement mortar mix.

Mortar not conforming to the specifications will be rejected, and the cost of such wasted mortar shall be borne by the bidder.

# 2. Aggregates

2.1 Sand shall generally conform to the grading of sand given in clause 4 of I.S.2116-1189 as detailed below in Table 4(b).

Table 4(b): Grading of Sand for use in Masonry Mortars:

I.S. Sieve Designation	Percentage passing by
4.75 mm	100
2.36 mm	90 to 100
1.18 mm	70 to 100
600 Micron	40 to 100
300 Micron	5 to 70
150 Micron	0 to 15

- 2.2 A sand whose grading falls out-side the specified limits due to excess or deficiency of coarse or fine particles may be processed to comply with the standard by screening through a suitably sized sieve and/or blending with required quantities of suitable size and particles.
- 2.3 The cost of sand for masonry will not be measured and paid separately and the cost of sand including the cost of stripping, transporting and storing and royalty charges shall be included in the unit price per cubic metre bid therefore in the relevant item of work in the bill of quantities for which this and is required.
- 2.4 The maximum quantities of deleterious material in the aggregates, as determined in accordance with IS 2386 (part II)/1963 shall not exceed the limits given in table I of IS 383. Unless otherwise specified all coarse aggregate in RCC shall be graded aggregate of 20mm nominal size. All aggregates shall be stored in hard impervious surface to ensure exclusion of all foreign material and as per IS 4082/1977 and specification no.5 of TNBP volume I.
- 2.5 Aggregates having a specific gravity below 2.6 (saturated surface dry basis) shall not be used without the special permission of the Engineer.

#### 3.Admixtures

Only where a beneficial effect is produced shall any admixture be used and that too after test has been carried out to convince the Engineer that no harmful effect will be produced by the use of such admixture and after approval by the Engineer. The admixture shall conform to IS 9103/1972.

# 4. Form work and centering

Steel/wooden form centering shall be used. If wooden form work is used, it shall consist of planks not less than 40mm thick and strong props. This shall be provided complying with clause 10 of IS 456/2000 and specification no.30.8 of TNBP. The timber for form works shall be best hard wood and got approved by the Engineer in charge. This shall be deemed to be included in the items of contract even otherwise specified.

## 5. Separator (cover block)

For bottom cover of beams, slabs etc., separators of pre-cast cement mortar blocks of suitable size with wire embedment as directed shall be used and tied to the reinforcement. Between layers of reinforcements, separators consisting of pieces of bars of suitable diameters shall be used. The required cover shall be provided as per clause 24-4 of IS 456/2000.

# 6.Pipes

- 6.1 General
- 6.1. All types of pipes required for the works should be of good quality conforming to relevant BIS and should be procured from reputed manufacturer of his authorized dealer. Each pipe should bear the trade mark of the manufacturer, the nominal diameter, class, weight, batch number and the last two digits of the year of manufacture suitably and legibly marked on it. The engineer shall have the right to conduct any test to ascertain the quality of the pipes supplied by the contractor. The contractor should make all necessary arrangements for testing the pipes. All the charges and expenses towards the testing shall be borne by the contractor. The materials which are classified for ISI marking should be supplied with ISI marking only.
- 6..2 If on examination of any sample from any portion of the supply the material is found to be sub-standard and not fit in accordance with the relevant specification, the entire consignment shall be rejected. In case of doubt whether the material conform to the specification or not, the decision of the Managing Director, Coimbatore Smart City Limited shall be final.
- 6.3 Deleted.
- 6.4 Deleted.

Managing Director Coimbatore Smart City Limited

#### COIMBATORE SMART CITY LIMITED

#### SPECIFICATION FOR CIVIL WORKS

#### 1. General:

- 1.1 Tamilnadu Building Practice (TNBP) shall be strictly followed for carrying out different items of work for which no standard specifications are available and no alternate specification have been given under the description of works.
- 1.2 Where any provision of the TNBP is repugnant of or at variance with any provision under BIS or description of work, technical specifications and conditions of contract, the provisions of the latter shall be deemed to supercede the provision of the TNBP.

#### 2. Earthwork:

# 2.1 Specification

Tamilnadu Detailed Building Practice (specification no.23 to the extent applicable) shall be followed for earthwork excavation.

# 2.2 Conveyance:

The excavated earth, blasted rubble etc., shall be conveyed and deposited in suitable places as directed by Engineer in charge within 150m of plant site on one side of the trench only.

# 2.3 Disposal of surplus earth:

The excavated soil which is surplus to that required for refilling and after allowing for settlement will have to be removed, spread and sectioned at places shown on the site during execution for purpose of widening or leveling the road. Sectioning is to be done as detailed in TNBP. The cost of removal of surplus earth after spreading/leveling/sectioning at site approved by the Engineer in charge to the disposal site will be measured under the relevant item of work in BOQ.

# 2.4 Shoring, Strutting and Bailing out water

The rate for excavation of trench work shall include charges of bailing out water wherever necessary and no extra payment will be made for any of these contingent works. While bailing out water, care should be taken to see that the bailed out water is properly channelised to flow away without stagnation or inundating the adjoining road surfaces and properties.

For shoring and strutting, the rate for excavation for the first 2m depth from GL shall include. Shoring and strutting beyond 2m depth from GL, payment will be made as per respective item in BOQ.

#### 3. Concrete:

## 3.1 Specification

Concrete for use in the works shall generally comply with TNBP (specification no.30) and the relevant BIS. The concrete mix shall be in specified proportions satisfying the maximum aggregate size, water cement ratio and required cube strength and workability as per IS 456-2000. Such concrete must be adequately vibrated to form solid mass without voids. The entire concreting works should be done only with the prior approval and the presence of Engineer in charge.

# 3.2 Mixing of concrete

The concrete shall be proportioned as far as cement and aggregate are considered by volume. The amount of water required being measured either by weight or volume the adjustments must be made to frequent intervals at the discretion of the Engineer or his assistant to account for the moisture content of the aggregates. The mixing operation shall be performed only in a mechanical concrete mixer and shall continue until the whole batch of uniform consistency and colour. The mixing of concrete shall be done in accordance with clause 8 and 9 of IS 456-2000.

# 3.3 Transporting, Placing and Compacting Concrete

3.3.1 Transportation, placing and compaction of concrete mix by mechanical vibrators shall be done in accordance with clause 12 or IS 456-2000. it is imperative that all concreting operations be done rapidly and efficiently with minimum re-handling and adequate manpower shall therefore by employed to ensure this.

- 3.3.2 The forms shall be first cleaned and moistened before placing concrete.
- 3.3.3 The mix should not be dropped from such a height as it may cause segregations and air entrainment. When the mix is placed in position, no further water shall be added to provided easier workability.
- 3.3.4 No concrete mix shall be used for the work if it has been left for a period exceeding its initial setting time before being deposited and vibrated into its final position in the member.
- 3.3.5 While one concrete is being placed in position it shall be provided generally complying with clause 12.4 of IS 456-2000 and as directed by the Engineer in charge. The efficiency of tempering and consolidation will be judged by complete absence of air pockets, voids and honey combing after removal of form works.

# 3.4 Curing

- 3.4.1 Curing shall be done to avoid excess shrinkage or harmful effort to the members generally complying with clause 12.5 of IS 456-2000.
- 3.4.2 The method adopted shall be effective and any special method used must be approved by the Engineer and be subject to complete supervision.
- 3.4.3 Any deficiency in concreting such as cracking, excessive honey combing, exposure of reinforcement or other fault which entail replacement of the defective part by fresh concrete and whatsoever remedy reasonable required without hampering the structural safety and architectural concept, all at the cost of contractor.

#### 3.5 Removal of Form Work.

3.5.1 Removal of form work shall be done as per TNDSS and as per IS 456-2000 and as directed by the Engineer in such a manner that no damage is caused to the concrete work.

# 3.6 Testing of concrete

3.6.1 During the course of construction works, preparation of test specimens, curing and casting of concrete shall be done in accordance with IS 1199 and IS 516 to ascertain the strength requirements and acceptance criteria indicated in IS 456-2000. The contractor shall provide all apparatus, labour and arrange to test the cubes at his own cost at the test laboratory decided by the Employer.

- 3.6.2 In addition to the above test, any other test which may if desired by the Engineer in charge be carried out from time to time as per relevant specifications at the cost of contractor. In case the concrete does not meet the strength required, all corrective measures shall be taken at once at the contractor's cost.
- 3.6.3 The inspection and testing of structures shall be done in accordance with clause 16 of IS 456-2000.

# 4. Masonry

4.1 All masonry works such as Random Rubble / Coarse Rubble / Brick work must be done as per TNBP specification and Bid schedule specification.

# 5. Plastering

- 5.1 Plastering would be 12mm, 20mm and 25mm thick cement plaster either plain or with water proof cement as may be specified.
- 5.2 The plastering items shall be executed in thickness and cement mortar of proportion as detailed in respective item in the BOQ. Similarly the plastering shall be either ordinary or with water proof for components as specified in respective item in the BOQ.
- 5.3 In case of water proof plaster standard and approved water proofing compound shall be mixed in cement mortar in required percentage as directed and then the plaster is applied.
- 5.4 The finishing shall be either smooth or rough as may be directed by the Engineer unless otherwise specifically mentioned in the BOQ.
- 5.5 Neat finishing wherever directed by the Engineer shall be done at no extra cost.
- 5.6 Curing and watering shall be done as directed and plaster shall be in alignment and level. Any substandard work is liable to be rejected and shall have to be redone at contractors cost. Sand to be used shall be of approved quality only. Cost of all scaffolding shall be included in the rates quoted in the BOQ.

# COIMBATORE SMART CITY LIMITED CHECK LIST FOR SUBMISSION OF BID

Bidder shall check the submission of relevant details and documents as mandated in the tender document, before submission of bids.

Sl.No	Details	Check
1	The tenderer should submit Scanned copy of Bid Security (Earnest Money Deposit) as mentioned in the tender document shall be either in the form of Demand Draft / FDR / Bank Guarantee from any Nationalized/Scheduled Bank in favour of The Managing Director, Coimbatore Smart City Limited. The original Bid Security should be submitted to the tender inviting officer before bid opening.	YES /NO
2	The tenderer should be a registered class I contractor and the registration certificate in any Government / Local bodies should be produced.	YES /NO
3	The tenderer should have executed single work of similar nature with value not less than 75 lakhs in the preceding "Three" years (2014-2015,2015-2016,2016-2017) for Government / Local bodies in Proof copy of Completion certificate should be enclosed	YES /NO
4	Whether Proof for having an annual minimum financial turnover of not less than 5 crore in any one financial year in the preceding "Three" years (2014-2015, 2015-2016,2016-2017) enclosed?	YES /NO
5	The Tenderer should submit ESI, PF and TNGST registration certificate should be enclosed. Copy of the Registration certificate to be enclosed.	YES /NO
6	Whether proof of the Tenderer should have amount of Rs.100 Lakhs available in his bank account on the date of submission of tender and the unutilized amount of overdraft / Credit facility extended to the tenderer by the Nationalized / Scheduled banks should be enclosed.	YES /NO

7	The bidders should have not been Black listed by any state or central Government Agency in India for which A self declaration in form of an undertaking to this effect should be given in Rs.50/- valued India Non-judicial stamp paper duly notarized and should be enclosed along with their tender.	YES /NO
8	Whether all the certificates Notarized has to be enclosed along with technical bid and the tenderer should satisfy all the above conditions otherwise the tender would be rejected summarily without assigning any reasons.	YES /NO
9	Whether the bidder has signed in all pages of the tender document	YES /NO
	e – Submission	
10.a	Whether the Cover Number – 1 of the online Bidding super scribed as "Technical Bid "contains Scanned copy Bid Security, Pre Qualification Documents and Tender document furnished by The Managing Director, Coimbatore Smart City Limited to be submitted in Cover-1 of online bidding.	YES /NO
b.	Whether the Cover Number – 2 of online bidding super scribed as "Price Bid "contains Price Bid Documents.	YES /NO

Managing Director, Coimbatore Smart City Limited.