**Volume-II**

**CENTER OF INNOVATIVE & APPLIED**

 **BIOPROCESSING DEPARTMENT OF BIOTECHNOLOGY**

**(Govt. of India)**

**Knowledge City, Sector‐81, Mohali**

**FINANCIAL BID DOCUMENT**

**Provision of RCC retaining wall on pile foundation for prevention of soil erosion from Natural Choe in campus.**

**TECHNICAL SPECIFICATIONS**

## 1.0 STANDARD SPECIFICATIONS TO BE FOLLOWED

The work should be executed as per following CPWD specification and also the specification laid in tender document. In case, above specifications are not available for certain item, then the material should conform to ISI and BIS standards.

## Civil Engineering Works

CPWD Specification 2009 Vol. I & II along with latest correction slips. These Specifications have replaced CPWD Specifications 1996 along with Correction Slips issued on them. These Specifications cover all types of Works. The specifications are available as a printed document issued by CPWD and also in soft copy PDF Format in CPWD website.

## Electrical Engineering Works

* + 1. [CPWD General Specifications for Electrical Works Part I Internal - 2013.](http://www.cpwd.gov.in/Publication/Internal2013.pdf)
		2. [CPWD General Specifications for Electrical Works Part II External - 1994.](http://www.cpwd.gov.in/Publication/Internal2013.pdf)
		3. [CPWD General Specifications for Electrical Works Part IV Sub Stations – 2013.](http://www.cpwd.gov.in/Publication/SubStationsFinal2013.pdf) The above specifications shall be read with upto date correction slips (if any).

### (A) CIVIL WORKS

**WORKMANSHIP FOR THE ENTIRE PLUMBING WORK.**

The workmanship shall be best of its kind and shall conform to the specifications, as below or Indian Standard Specifications in every respect or latest trade practices and shall be subject to approval of the Engineer-in- Charge. All materials and/or Workmanship which in the opinion of the Engineer-in- Charge is defective or unsuitable shall be removed immediately from the site and shall be substituted with proper materials and/or workmanship forthwith.

### WARRANTY AND HANDOVER

The Contractor shall warrant that all plant, materials and equipment supplied and all workmanship performed by him to be free from defects of whatsoever nature before handover to the Engineer-in-Charge. All the Guarantee/Warranty certificates of all the items shall be in the name of Institute i.e., CENTER OF INNOVATIVE & APPLIED BIOPROCESSING (CIAB), Mohali.

### HANDING OVER OF DOCUMENTS

All testing and commissioning shall be done by the Contractor to the entire satisfaction of the Engineer-in- Charge and all testing and commissioning documents shall be handed over to the Engineer-in-Charge.

**NOTE: In case of any contradiction between the specifications, the contractor shall take the prior approval of the Engineer- In – Charge before executing the same at site.**

## LIST OF MAKES TO BE ADOPTED

|  |  |  |
| --- | --- | --- |
| S. No | Item | Make |
| 1. | Cement | J K Lakshmi/ ACC/ Ultratech/ Ambuja |
| 2. | Steel Reinforcement (TMT bars) | Tata/JSW Jindal/ Sail/Vizag |
| 3. | Mild steel tubular/section work/Tubes | Jindal/Apollo/Tata/SAIL |
| 4. | Admixtures Compound | BASF, SIKKA, SKOF INDIA |

**Note: -** Any other material makes not mentioned above shall be ISI marked & got approved from Engg-in-charge

## NAME OF WORK: - Provision of RCC retaining wall on pile foundation for prevention of soil erosion from Natural Choe in campus

**ABSTRACT SHEET**

|  |  |  |
| --- | --- | --- |
| **S.NO** | **PARTICULARS** | **AMOUNT (In INR)** |
| 1 | **ESTIMATED VALUE OF WORK (INCLUSIVE OF TAXES, LABOUR****CESS ETC)** | **Rs 1,68,68,787/-** |
| 2 | **PERCENTAGE (% AGE) QUOTE****PLUS/MINUS (+/ -) BY BIDDER ON ESTIMATED AMOUNT (IN FIGURES)** |  |
| 3 | **PERCENTAGE (% AGE) QUOTE****PLUS/MINUS (+/ -) BY BIDDER ON ESTIMATED AMOUNT (IN WORDS)** |  |
| 4 | **NET AMOUNT AFTER UN-****CONDITIONAL PERCENTAGE REBATE OR QUOTE ABOVE ESTIMATED VALUE ((IN FIGURES)** |  |
| 5 | **NET AMOUNT AFTER UN-****CONDITIONAL PERCENTAGE REBATE OR QUOTE ABOVE ESTIMATED VALUE ((IN WORDS)** |  |

Stamp & Signatures of bidder

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.N** | **Description of Item** | **Unit** | **Quantity** | **Rate** | **Amount** |
| **1** | **Earth work in excavation by mechanical means (hydraulic excavator)/manual means in foundation, trenches of drains at all levels, depth, lifts etc including dressing of sides and ramming of bottoms lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m.** |  |  |  |  |
|  |  | **Cumec** | **6800.00** | **157.50** | **1071000.00** |
| **2** | **Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 m and lift up to 1.5 m** |  |  |  |  |
|  | **total in cum** | **Cumec** | **6800.00** | **112.40** | **764320.00** |
| **3** | **Supply, laying earth from outside including the cost of filling in layers not more than 20 cm in depth, ramming, carriage, royalty etc complete as per directions of Engineer-incharge** | **Cumec** | **1500.00** | **220.00** | **330000.00** |
| **4** | **Boring with hydraulic piling rigs with power units, Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M-25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured up to to the bottom of pile cap) : Successful bidder to provide load testing of piles for adherence to design capacity as per relevant IS code free of cost** |  |  |  |  |
|  | **500 mm dia piles** | **Metre** | **1706.666****7** | **2715** | **4633600** |
| **5** | **Providing & laying in position cement concrete of specified grade excluding the cost of centering and shuttering –All work up to plinth level.** |  |  |  |  |
|  | **1:4:8 (1cement: 4 coarse sand: 8 graded stone aggregate 40 mm nominal size).** | **m3** | **140.25** | **4004.0****0** | **561561.00** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **6** | **Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of****R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures, in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability, as per direction of the Engineer-in-charge. (Note: -Cement content considered in this item is @330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately) Successful bidder shall get the design mix of concrete done from a Government Department/ NABL laboratory with permission of Engg- in-charge. No additional cost shall be payable to contractor for same test. The vendor need to vetted from Government Approved Designer/Architect the design before starting the work** |  |  |  |  |
|  | **All works upto plinth level and above at all levels.** | **m3** | **649.20** | **6713.6****0** | **4358469.12** |
| **7** | **Add for using extra cement in the items of design mix over and above****the specified cement content therein** |  |  |  |  |
|  |  | **quintal** | **10.00** | **672.75** | **6727.50** |
| **8** | **Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth****level & above levels.** |  |  |  |  |
|  | **Thermo-mechanically treated bars- FE- 500****D** | **Kg** | **71138.4** | **56.6** | **4026433.44** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **9** | **Centering & shuttering including strutting, propping etc. and removal of form for: - Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.** |  |  |  |  |
|  |  | **Sqm** |  |  |  |
|  |  |  | **2404.80** | **380.00** | **913824.00** |
| **10** | **Centering & shuttering including strutting, propping etc. and removal of form for: - Foundation, footings, bases of columns, etc. for mass concrete.** |  |  |  |  |
|  |  | **Sqm** |  |  |  |
|  |  |  | **182.41** | **196.45** | **35834.84** |
|  |  |  |  | **Total** | **16701769.9** |
|  | **Add 1% for labour cess** |  |  |  | **167017.70** |
|  | **Net Total amount including taxes, profits, wastage, labour etc.** |  |  |  | **16868787.6** |
|  |  |  |  | **SAY Rs****1,68,68,787/-** |

### NOTE: - Payment shall be released item wise based on actual measurement examined at site by Engineer- In- Charge. Rate quoted shall be deemed to be inclusive of GST/other taxes. The vendor need to vetted from Government Approved Designer/Architect the design before starting the work.

Signature/Stamp of Bidder