Volume-II

NATIONAL AGRI-FOOD BIOTECHNOLOGY INSTITUTE (NABI)

(Department of Biotechnology, Ministry of Science and Technology, Govt. of India) Knowledge City, Sector-81, SAS Nagar, Mohali, Punjab

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.

1.1 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.

1.2 Electrical Engineering Works

- (A) CPWD General Specifications for Electrical Works Part I Internal 2013.
- (B) CPWD General Specifications for Electrical Works Part II External 1994.
- (C) CPWD General Specifications for Electrical Works Part IV Sub Stations 2013.

The above specifications shall be read with up to 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., National Agri-Food Biotechnology Institute (NABI), 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 work | Jindal/Apollo/Swasthik/Tata |
| 4 | Admixtures Compound | BASF, SIKKA, SKOF INDIA |

 $\textbf{Note:-} \ \textbf{Any other material make not mentioned shall be ISI marked \& got approved from Engg-in-charge}$

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 | Rs 1,73,66,023/- |
| | (INCLUSIVE OF TAXES, LABOUR | |
| | CESS ETC) | |
| 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

BOQ for the work of provision of retaining wall on pile foundation, allied works for protection from Natural choe.

| S.N. | Description. | Unit | Qty | Rate | Amount |
|----------|--|-------|---------|-------|--------------|
| | | | | | |
| | Earth work in excavation by mechanical | | | | |
| 1 | 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. | | | | |
| | Qty in cum. | cubic | 6717.00 | 157.5 | 10,57,927.50 |
| | | metre | | | |
| | | | | | |
| <u>2</u> | 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 upto 1.5 m. | | | | |
| | total in cum | cubic | 6717.00 | 112.4 | 7,54,990.80 |
| | | metre | | | |
| 3 | Supply, laying earth from outside including | cubic | 1500.00 | 220.0 | 3,30,000.00 |
| | the cost of filling in layers not more than 20 | metre | | | |
| | cm in depth, ramming, carriage, royalty etc | | | | |
| | complete as per directions of Engineer-in- | | | | |
| | charge | | | | |

| <u>4</u> | 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 upto 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. | | | | |
| а | 300 mm dia pile | metre | 1280.00 | 2143.05 | 27,43,104.00 |
| b | 500 mm dia piles | metre | 912.00 | 2715.0 | 24,76,080.00 |
| | | | | | |
| <u>5</u> | Providing & laying in position cement | | | | |
| | concrete of specified grade excluding the | | | | |
| | cost of centering and shuttering -All work | | | | |
| | upto plinth level. | | | | |
| _ | 1:4:8 (1cement: 4 coarse sand: 8 graded | | | | |
| | stone aggregate 40 mm nominal size). | | | | |
| | | cubic | 165.61 | 4004.0 | 6,63,102.44 |
| | | metre | | | |
| | | | | i e | • |

| | | metre | | | |
|---|---|-------|--------|--------|--------------|
| | | cubic | 652.39 | 6713.6 | 43,79,893.90 |
| | levels. | | | | |
| | test. All works upto plinth level and above at all | | | | |
| | cost shall be payable to contractor for same | | | | |
| | permission of Engg- in-charge. No additional | | | | |
| | Department/ NABL laboratory with | | | | |
| | concrete done from a Government | | | | |
| | Successful bidder shall get the design mix of | | | | |
| | separately) | | | | |
| | payable/recoverable | | | | |
| | Excess/less cement used as per design mix is | | | | |
| | 330 kg/cum. | | | | |
| | Cement content considered in this item is @ | | | | |
| | direction of the Engineer-in-charge. (Note :- | | | | |
| | impairing strength and durability, as per | | | | |
| | concrete,improve workability without | | | | |
| | 9103 to accelerate/ retard setting of | | | | |
| | in recommended proportions as per IS: | | | | |
| | reinforcement, including cost of admixtures, | | | | |
| | centering, shuttering finishing and | | | | |
| | mixer to site of laying, excluding the cost of | | | | |
| | including pumping of R.M.C. from transit | | | | |
| | grade for reinforced cement concrete work, | | | | |
| | manufactured as per mix design of specified | | | | |
| | having continuous agitated mixer, | | | | |
| | site of work in transit mixer for all leads, | | | | |
| | automatic batching plant and transported to | | | | |
| | approved design mix, manufactured in fully | | | | |
| | concrete work, using cement content as per | | | | |
| | M-25 grade concrete for reinforced cement | | | | |
| 6 | Providing and laying in position ready mixed | | | | |

| 7 | Centering & shuttering including strutting, | | | | | |
|---|---|-----|----------|----------------------|----------------|--|
| | propping etc. and removal of form for:- | | | | | |
| | Foundation, footings, bases of columns, etc. | | | | | |
| | for mass concrete. | | | | | |
| | | sqm | 177.30 | 196.45 | 34,830.59 | |
| 8 | Walls (any thickness) including attached | | | | | |
| | pilasters, buttresses, plinth and string | | | | | |
| | courses etc. | | | | | |
| | | sqm | 2064.000 | 380.0 | 784320.00 | |
| 9 | 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 | | | | | |
| | | Kgs | 70138.4 | 56.6 | 39,69,833.37 | |
| | TOTAL OF CIVIL WORKS | | | | 1,71,94,082.59 | |
| | Add 1% for labour cess | | | | 171940.826 | |
| | Net Total amount including taxes, profits, | | | | 1,73,66,023.42 | |
| | wastage, labour etc. | | | | | |
| | | | | SAY Rs 1,73,66,023/- | | |

NOTE: -

- Payment shall be released item wise based on actual measurement examined at site by Engineer- In- Charge.
- Rates quoted by bidder shall be deemed to be inclusive of all taxes, profits, labour etc.

Signature/Stamp of Bidder