

GOVERNMENT OF WEST BENGAL**PROJECT: West Bengal Major Irrigation and Flood Management Project (WBMIFMP)****PROCUREMENT OF CIVIL WORKS THROUGH REQUEST FOR QUOTATION (RFQ)/SHOPPING
PROCEDURES***(Lump sum and percentage rate tender)**(Two-Envelope with e-Procurement)**(For Contracts valued less than the equivalent of US \$ 100,000 each)***RFQ No: i) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_1****ii) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_2****iii) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_3****iv) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_4****issued on 11.11.2022****Name of work:****Soil investigation work in 32 locations in connection with New/Re- construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package– XI, comprising 4 Lots).****Lot -1:** At Sehagori, Kamargoria Kharibon, Nayanjuli, Sauria Mansatala, Sameswar- I, Chardaha and Satpota-I under Amta-I and II Blocks under WBMIFMP.**Lot-2:** At Panchanantala, Penro, Harishpur Ghoshpur, Kanpur, Natungram (Par Kanpur), Santoshnagar, Purash, Kamaria under Amta-I & Udaynarayanpur Blocks under WBMIFMP.**Lot-3:** At Gorupora, Tekhala, Chelaghai, Simultala-2, Solbhaga, Kharigaria Manasatala, Simultala-I, Nakubar under Khanakul-II & Amta-II Blocks under WBMIFMP.**Lot-4:** At Chingra, Telirdaha, Balaichak, Right bank of short cut Diversion channel (near Khajurdaha), Right bank of short cut Diversion channel (near Sehagori bridge) two nos (2) location, left bank of short cut Diversion channel (near Sehagori bridge), left bank of short cut Diversion channel (near Saoria), Buxi (2nd) under Khanakul-II, Bagnan-I & Amta-II Blocks under WBMIFMP.

Table:

PERIOD OF DOWNLOADING OF BIDDINGDOCUMENT ONLINE	FROM 11/11/2022 (18: 00HoursIST) TO 05/12/2022 (14:00 Hours IST)
LAST DATE AND TIME FOR RECEIPT OF CLARIFICATION BY BIDDERS	17/11/2022 UPTO 16:00 Hours (IST)
TIME AND DATE OF PRE-BID MEETING AT THE OFFICE OF THE EXECUTIVE ENGINEER, HOWRAH IRRIGATION DIVISION.	18/11/2022 AT 15:00 Hours (IST)
START DATE AND TIME FOR SUBMISSION OF BIDS	21/11/2022 AT 15.00 Hours (IST)
LAST DATE AND TIME FOR RECEIPT OF BIDS	05/12/2022UPTO 14:00 Hours (IST)
*TIME AND DATE OF OPENING OF BIDS – TECHNICAL PART	05/12/2022AT 15:00 Hours (IST)
VALIDITY REQUIRED FOR BANK GUARANTEE FOR BIDS SECURITY	AT LEAST UPTO 06/04/2023
TIME AND DATE OF OPENING OF BIDS- FINANCIAL PART	<i>The firms that qualify technically shall be notified subsequently for opening of the financial part of their bids.</i>
PLACE OF OPENING OF BIDS	Office of The Additional Project Director -IV DPMU-II, WBMIFMP Jalasampad Bhaban (9th Floor), Bidhannagar, Kolkata- 700 091 West Bengal, Country: India , Telephone: 033-23341232 Electronic mail address: apd2019dpmu@gmail.com
OFFICER INVITING BIDS	Additional Project Director -IV DPMU-II, WBMIFMP Jalasampad Bhaban (9th Floor), Bidhannagar, Kolkata- 700 091 West Bengal

**Should be the same as the deadline for submission of bidsor promptly thereafter. The firms that qualify technically shall be notified subsequently for opening of the financial part of their bids.*

REQUEST FOR QUOTATIONS

Procurement of Works under RFQ/Shopping Procedures

E-Procurement Notice

(Two-Envelope with e-Procurement Bidding Process)

Memo No:870-DPMU-II Date: 11/11/2022

Project: *West Bengal Major Irrigation and Flood Management Project (WBMIFMP)*

Contract title: Soil investigation work in 32 locations in connection with New/Re-construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).

Lot -1: At Sehagori, KamargoriaKharibon, Nayanjuli, SauriaMansatala, Sameswar- I, Chardaha and Satpota-I under Amta-I and II Blocks under WBMIFMP.

Lot-2: At Panchanantala, Penro ,HarishpurGhoshpur, Kanpur, Natungram (Par Kanpur), Santoshnagar, Purash,Kamaria under Amta-I&Udaynarayanpur Blocks under WBMIFMP.

Lot-3: At Gorupora,Tekhala,Chelaghai, Simultala-2, Solbhaga, KharigariaManasatala, Simultala-I, Nakubar under Khanakul-II &Amta-II Blocks under WBMIFMP.

Lot-4: At Chingra, Telirdaha, Balaichak, Right bank of short cut Diversion channel (near Khajurdaha), Right bank of short cut Diversion channel (near Sehagori bridge) two nos (2) location, left bank of short cut Diversion channel(near Sehagori bridge), left bank of short cut Diversion channel(near Saoria), Buxi(2nd) under Khanakul-II, Bagnan-I &Amta-II Blocks under WBMIFMP.

RFQ No: i) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_1

ii) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_2

iii) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_3

iv) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_4

issued on 11.11.2022

Applicable Procurement Guidelines/Regulations Date: “Procurement Regulations for IPF Borrowers, July 2016 Revised August 2018 and November 2018” (“Procurement Regulations”)

1. The Government of India has received/has applied for/intends to apply for financing from the World Bank towards the cost of the **West Bengal Major Irrigation and Flood Management Project (WBMIFMP)** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this request for quotations is issued. The **Additional Project Director - IV, DPMU-II, WBMIFMP** (*implementing agency*) invites quotations electronically from the eligible bidders for the following works.

RFQ No.	Brief Description of the Works	Approximate value of Works (Rs.)	Period of Completion
Soil investigation work in 32 locations in connection with New/Re- construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).			
WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_1	Lot-1: At Sehagori, Kamargoria Kharibon, Nayanjuli, Sauria Mansatala, Sameswar-I, Chardaha and Satpota-I under Amta-I and II Blocks under WBMIFMP.	Rs. 1630979.42 (Rupees Sixteen lakhs thirty thousand nine hundred seventy nine and forty two paise only)	3 (Three) Months including all seasons
WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_2	Lot-2: At Panchanantala, Penro, Harishpur Ghoshpur, Kanpur, Natungram (Par Kanpur), Santoshnagar, Purash, Kamaria under Amta-I & Udaynarayanpur Blocks under WBMIFMP.	Rs. 1863976.48 (Rupees Eighteen lakhs sixty three thousand nine hundred seventy six and forty eight paise only)	3 (Three) Months including all seasons
WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_3	Lot-3: At Gorupora, Tekhala, Chelaghai, Simultala-2, Solbhaga, Kharigaria Mansatala, Simultala-I, Nakubar under Khanakul-II & Amta-II Blocks under WBMIFMP.	Rs. 1863976.48 (Rupees Eighteen lakhs sixty three thousand nine hundred seventy six and forty eight paise only)	3 (Three) Months including all seasons
WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_4	Lot-4: At Chingra, Telirdaha, Balaichak, Right bank of short cut Diversion channel (near Khajurdaha), Right bank of short cut Diversion channel (near Sehagori bridge) two nos(2) location, left bank of short cut Diversion channel (near Sehagori bridge), left bank of short cut Diversion channel (near Saoria), Buxi(2nd) under Khanakul-II, Bagnan -I & Amta-II Blocks under WBMIFMP.	Rs. 2096973.54 (Rupees Twenty lakhs ninety six thousand nine hundred seventy three and fifty four paise only)	3 (Three) Months including all seasons

2. This e-Procurement notice includes the following documents¹ to facilitate preparation and submission of quotations, criteria for qualification, evaluation, and for award of contract; and relevant forms to be filled by the bidders. Implementing Agency has not issued a separate RFQ document for this purchase. The e-Procurement notice including the various documents and forms to be filled etc. can be downloaded free of cost by logging on to the website <https://wbtenders.gov.in>. The bidders would be required to register in the website which is free of cost.
- Detailed Bill of Quantities, with estimated rates and prices;
 - Technical Specifications;
 - Instructions to Bidders;
 - Qualification Information;
 - Format for Submission of Quotation;
 - Criteria for Evaluation and Award of Contract;
 - Relevant Forms; and
 - Draft Contract Agreement format which will be used for finalizing the agreement for this Contract.
3. For submission of the bid, the bidder is required to have Digital Signature Certificate (DSC) from one of the Certifying Authorities authorised by Government of India for issuing DSC. Aspiring bidders who have not obtained the user ID and password for participating in e-procurement in this Project, may obtain the same from the website: <https://wbtenders.gov.in>.
- Any bidder not having the DSC may obtain the same from NIC on payment of requisite fees, before the bid submission deadline.
4. Quotations, both Technical Part and Financial Part shall be submitted on <https://wbtenders.gov.in> on or before **14:00hours on 05/12/2022**. Any quotation or modifications to quotation received outside e-procurement system will not be considered. The electronic bidding system would not allow late submission of quotations. The 'Technical Part' of the Quotations will be opened online on **05/12/2022 at 15:00 hours**, this can also be viewed by the bidders online. The electronic summary of quotation opening of technical part will be generated and uploaded online.
5. If the implementing agency's office happens to be closed on the date of opening of the Quotations as specified, the 'Technical Part' of the Quotations will be opened on the next working day at the same time. The Financial Parts of the Quotations shall remain unopened in the e-procurement system, until the subsequent online opening, following the evaluation of the Technical Parts of the Quotations.
6. Other details can be seen in the RFQ document. The implementing agency shall not be held liable for any delays due to system failure beyond its control. A Bidder requiring any clarification of the RFQ document may notify the Implementing agency online or may visit the office of the implementing agency at the address given below.
7. The address for communication is as under:

¹ IA to modify the list of documents as required.

Name & Designation of Officer: The Additional Project Director -IV, DPMU-II, WBMIFMP. I & W Directorate, Government of West Bengal

Official Address: Jalasampad Bhaban (9th Floor), Bidhannagar, Kolkata- 700 091.

Email: apd2019dpmu@gmail.com; Telephone: 033-23341232

Instructions to Bidders

SECTION - A

1. Scope of Works

The Additional Project Director -IV, DPMU-II, WBMIFMP, Jalasampad Bhaban (9th Floor), Bidhannagar, Kolkata- 700 091, West Bengal(*implementing agency&Employer*) invites quotations for the works as detailed in the table given below:

RFQ No.	Brief Description of the Works	Approximate value of Works (Rs.)	Period of Completion
Soil investigation work in 32 locations in connection with New/Re- construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).			
WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_1	Lot-1: At Sehagori, KamargoriaKharibon, Nayanjuli, SauriaMansatala, Sameswar- I, Chardaha and Satpota-I under Amta-I and II Blocks under WBMIFMP.	Rs. 1630979.42 (Rupees Sixteen lakhs thirty thousand nine hundred seventy nine and forty two paisa only)	3 (Three) Months including all seasons
WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_2	Lot-2: At Panchanantala, Penro ,HarishpurGhoshpur, Kanpur, Natungram (Par Kanpur),Santoshnagar, Purash,Kamaria under Amta-I&Udaynarayanpur Blocks under WBMIFMP.	Rs. 1863976.48 (Rupees Eighteen lakhs sixty three thousand nine hundred seventy six and forty eight paisa only)	3 (Three) Months including all seasons
WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_3	Lot-3: At Gorupora,Tekhala,Chelaghai, Simultala-2, Solbhaga, KharigariaManasatala, Simultala-I, Nakubar under Khanakul-II &Amta-II Blocks under WBMIFMP.	Rs. 1863976.48 (Rupees Eighteen lakhs sixty three thousand nine hundred seventy six and forty eight paisa only)	3 (Three) Months including all seasons

WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_4	Lot-4: At Chingra, Telirdaha, Balaichak, Right bank of short cut Diversion channel (near Khajurdaha), Right bank of short cut Diversion channel (near Sehagori bridge) two nos(2) location, left bank of short cut Diversion channel (near Sehagori bridge), left bank of short cut Diversion channel (near Saoria), Buxi(2nd) under Khanakul-II, Bagnan -I & Amta-II Blocks under WBMIFMP.	Rs. 2096973.54 (Rupees Twenty lakhs ninety six thousand nine hundred seventy three and fifty four paise only)	3 (Three) Months including all seasons
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The successful bidder will be expected to complete the works by the intended completion date specified above.

2. Qualification of the bidder

2.1. Qualification Information to be provided by the Bidder: the bidder shall provide information on his qualification which shall include: -

- (a) Total monetary value of works executed by him for each year of the last 3 years;
- (b) List of works (similar to the works described in Para 1) completed satisfactorily as a prime contractor during the last 3 years, enclosing certificates from the respective Employers in support of experience claimed along with the Employers' contact numbers;
- (c) Report on his financial standing, along with last 3 years' financial statements/Profit and Loss Statements; and
- (d) Details of any litigation, during the last 3 years in which the bidder is involved, the parties concerned, and disputed amount or award in each case (Give details of both completed and pending cases).

2.2. Qualification Criteria: to qualify for award of the contract, the bidder: -

1. Should have satisfactorily completed as a prime contractor at least one similar work of value not less than for

Lot. 1 :Rs. 1304784.00 (Thirteen lakhs four thousand seven hundred and eighty four only) in the last three years;

Lot 2 : Rs. 1491181.00 (Fourteen lakhs ninety one thousand one hundred and eighty one only) in the last three years;

Lot. 3 : Rs. 1491181.00 (Fourteen lakhs ninety one thousand one hundred and eighty one only) in the last three years;

Lot. 4 : Rs. 1677579.00 (Sixteen lakhs seventy seven thousand five hundred and seventy nine only) in the last three years.

- 3 **Eligibility – Conflict of Interest:** A Bidder (a) shall not participate in more than one Quotation; (b) shall not have conflict of interest as defined in the Bank's

Procurement Regulations/ Guidelines and (c) should not have been (i) temporarily suspended or debarred by the World Bank Group in compliance with the Bank's Anti-Corruption Guidelines and its Sanctions Framework.

4. **Clarifications & Amendments:** If the Employer receives any request for clarification of this RFQ document, it will upload its response together with any amendment to this document, on the e-procurement portal for information of all Bidders. Bidders should check on the e-procurement system, for any amendments to this RFQ document.

5. Quotation Prices

1. The quotation shall be execute the whole works as described in the Bill of quantities, drawings and technical specifications. Corrections, if any, in the quotation shall be carried out by editing the information before electronic submission on e-Procurement Portal.
2. All duties, taxes and other levies payable by the contractor under the contract shall be included in the total price.
3. The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
4. The rates should be quoted in Indian Rupees only.
5. **Bid security @ 2% of works** value to be submitted in the form of Bank Guarantee from any scheduled bank in favour of The Additional Project Director -IV, DPMU-II, WBMIFMP, Jalasampad Bhaban (9th Floor), Bidhannagar, Kolkata- 700 091, West Bengal. Original B.G. (EMD) in favour of Additional Project Director -IV, DPMU-II, WBMIFMP, will have to be submitted physically to the office of the Additional Project Director - IV, DPMU-II, WBMIFMP, within the last date of Bid Submission i.e 29/11/2022 upto 14:00 Hours (IST) otherwise the Bid will be cancelled.

Lot No	Bid Security
Lot 1	Rs 32620.00
Lot 2	Rs 37280.00
Lot 3	Rs 37280.00
Lot 4	Rs 41939.00

6. Preparation of Quotations

- 6.1** The bidder is advised to visit the site of works at his own expense and obtain all information that may be necessary for preparing the quotation.
- 6.2** Each bidder shall submit only one quotation. Bidders shall not contact other Bidders on matters relating to this quotation.
- 6.3** The quotation shall comprise two Parts, namely the Technical Part and the Financial Part. Both Parts shall be submitted online simultaneously.

6.4 The Technical Part of Quotation shall comprise the following:

- (a) **Letter of Quotation – Technical Part** as per Format given in Section B;
- (b) **Authorization:** Power of Attorney of signatory of Quotation (Paragraph 1.1 of Qualification Information);
- (c) **Annual Turnover:** Confirmation showing Annual Turnover in soil investigation works of similar nature in the last three financial years. [ITB Clause 2.1 (a)];
- (d) **Qualifications:**
 - (i) Qualification information and supporting documents relating to similar nature of works executed and payments received. (ITB Clause 2.1 (b) and paragraph 1.3 of Qualification Information);
 - (ii) Details of proposed sub-contractors; (Paragraph 1.4 of Qualification Information); and
 - (iii) Other details listed in Paragraphs 1.6 and 1.7 of the Qualification Information Form;
- (e) **Complete address** and contact details of the Bidder having the following information:
 - Name of Firm
 - Address for communication
 - Telephone No(s): Office
 - Mobile No.
 - Facsimile (FAX) No.
 - Electronic Mail Identification (E-mail ID)
- (f) The Technical Part of Quotation shall not include any financial information related to the Quotation price. Where material financial information related to the Quotation price is contained in the Technical Part of Quotation, the Quotation shall be declared non-responsive.

6.5 The Financial Part of Quotation shall comprise the following:

- (a) **Letter of Quotation - Financial Part;**

- (b) **Priced Bill of Quantities:** (using the BOQ uploaded with the RFQ document) wherein the rates shall be entered online.

- 6.6 Signing of Quotations:** The name and position held by each person signing the quotation and related documents must be typed or printed below the signature.
- 6.7 Deadline for Submission of Quotations:** Quotations must be uploaded online no later than the deadline for submission of quotations viz. time 14.00 (hours) and date 05/12/2022 (day, month, year), as per server time. A Bidder may modify its Quotation any number of times by using the appropriate option on the e-Procurement Portal, before the deadline for submission of Quotations.
- 6.8 Validity of Quotation:** Quotation shall remain valid for a period not less than 45 days after the deadline date specified for submission.

7. Quotation Submission:

- (a) The Letter of Quotation – Technical Part, and Letter of Quotation – Financial Part shall be filled, signed and scanned copies shall be uploaded along with the Priced Bill of Quantities that shall be entered using the Forms available online, without any alterations. All blank spaces shall be filled in with the information requested. Scanned copies of all other documents shall also be uploaded on the e-procurement website.
- (b) All documents are required to be signed digitally by the Bidder. The System generates a Unique Quotation Identification Number, time stamped as per server time, as an acknowledgement for Quotation submission. Detailed guidelines for viewing and submission of Quotations online are given in the website.

8. Online Opening and Evaluation of Technical Parts of Quotations: The ‘Technical Part’ of the Quotations will be opened online on the specified date and time. This can also be viewed by the bidders online, and electronic summary of quotation opening of technical part will be generated and uploaded online. The Financial Parts of the Quotations shall remain unopened in the e-procurement system, until the subsequent online opening, following the evaluation of the Technical Parts of the Quotations.

- The Employer shall examine the technical part of the quotation to determine whether the quotation (a) has been properly signed (Clause 6.6); (b) meets the eligibility criteria (Clause 3); (c) is substantially responsive to the requirements of the RFQ document; and (d) meets the qualification criteria specified in ITB Clause 2.
- Only Quotations that are both substantially responsive to the RFQ document and meet all Qualification Criteria shall qualify for opening of the Financial Parts of their Quotations at the second online opening.

- Employer shall notify in writing those Bidders who have failed to meet the Qualification Criteria or whose Quotations were considered non-responsive to the requirements in the RFQ document, advising them that their Technical Part of Quotation failed to meet the requirements of the RFQ document; and that their Financial Part of the Quotation shall not be opened.
- Simultaneously Employer shall notify in writing those Bidders whose Technical Parts of Quotations have been evaluated as substantially responsive and meeting the Qualification Criteria that their Quotation has been evaluated as substantially responsive to the RFQ document and that their Financial Part of Quotation will be opened online at Date and time.

9. Online Opening and Evaluation of Financial Parts of Quotations: The 'Financial Part' of the Quotations will be opened online on the specified date and time. This can also be viewed by the bidders online, and electronic summary of quotation opening of financial part will be generated and uploaded online.

- a) The Employer shall examine and confirm that Letter of Quotation – Financial Part and Priced Bill of Quantities are in accordance with the requirements specified in the RFQ document. If any of these documents or information is missing, the offer shall be rejected.
- b) During the evaluation of Financial Parts of Quotation, the substantial responsiveness of the Quotations will be further determined with respect to those RFQ conditions that were not examined in evaluation of Technical Parts of Quotations.

10. Award of contract

The Employer will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price and who meets the specified qualification criteria.

- 10.1** Notwithstanding the above, the Employer reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.
- 10.2** The bidder whose quotation is accepted will be notified of the award of contract by the Employer prior to expiration of the quotation validity period.

11. Performance Security

Within 15 days of receiving letter of acceptance, the successful bidder shall deliver to the Additional Project Director -IV, DPMU-II, WBMIFMP, Jalasampad Bhaban (9th Floor), Bidhannagar, Kolkata- 700 091, West Bengal (Employer) the performance security (either a bank guarantee or a bank draft in favour of the Employer) for an amount equivalent of 3 % of the contract price. The Performance Security shall be valid till the expiry of the period of maintenance of the work, specified in Clause 12. Failure of the successful Bidder to furnish performance security and to sign the agreement within the period stipulated shall constitute sufficient grounds for annulment of award and debarring the bidder from participation in bidding for works by the Employer for a period of one year, in

which case the Employer may make the award to the next lowest evaluated bidder or seek quotations afresh.

SECTION - B

- 1. Format for Qualification Information.**
- 2. Format for Submission of Quotation.**
- 3. Format of Letter of Acceptance.**

QUALIFICATION INFORMATION

1 For Individual Bidders

1.1 Principal place of business: _____

Power of attorney of signatory of Quotation.

[Attach copy]

1.2 Total value of Soil Investigation work performed in the last three years (in Rs. Lakhs)

	2019-20	
2020-21		
2021-22		

1.3 Work performed as prime contractor (in the same name) on works of a similar nature over the last three years.

<u>Project Name</u>	<u>Name of Employer</u>	<u>Description of work</u>	<u>Contract No.</u>	<u>Value of contract (Rs. Lakhs)</u>	<u>Date of issue of work order</u>	<u>Stipulated period of completion</u>	<u>Actual date of completion*</u>	<u>Remarks explaining reasons for delay and work completed</u>
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Existing commitments and on-going works:

Description of Work	Place & State	Contract No. & Date	Value of Contract (Rs. Lakhs)	Stipulated period of completion	Value of works* remaining to be completed (Rs. Lakhs)	Anticipated date of completion
(1)	(2)	(3)	(4)	(5)	(6)	(7)

* *Enclose a certificate from the Engineer concerned for completion as well as value of pending works.*

1.4 Proposed subcontracts and firms involved.

Sections of the works	Value of Sub-contract	Sub-contractor (name & address)	Experience in similar work
*	*	*	*
*	*	*	*
*	*	*	*
*	*	*	*
	*	*	

1.5 Evidence of access to financial resources to meet the requirements of working capital: cash in hand, lines of credit, etc. List them below and attach copies of supporting documents.

1.6 Name, address, and telephone, telex, and fax numbers of the Bidders' bankers who may provide references if contacted by the Employer.

1.7 Information on litigation history in which the Bidder is involved.

Name of the work	Agreement number/date	Name & address of Employer	Contract Value in Rs	Cause of dispute	Amount Disputed	Remarks showing present status

Letter of Quotation–Technical Part

The Bidder must prepare the Letter of Quotation on stationery with its letterhead clearly showing the Bidder's complete name and address. The italicized text is for Bidder's guidance in preparing these forms and shall be deleted from the final products.

Description of the Works- Soil investigation work in 32 locations in connection with New/Re- construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).

Lot -1: At Sehagori, KamargoriaKharibon, Nayanjuli, SauriaMansatala, Sameswar- I, Chardaha and Satpota-I under Amta-I and II Blocks under WBMIFMP.

Lot-2: At Panchanantala, Penro ,HarishpurGhoshpur, Kanpur, Natungram (Par Kanpur), Santoshnagar, Purash,Kamaria under Amta-I&Udaynarayanpur Blocks under WBMIFMP.

Lot-3: At Gorupora,Tekhala,Chelaghai, Simultala-2, Solbhaga, KharigariaManasatala, Simultala-I, Nakubar under Khanakul-II &Amta-II Blocks under WBMIFMP.

Lot-4: At Chingra, Telirdaha, Balaichak, Right bank of short cut Diversion channel (near Khajurdaha), Right bank of short cut Diversion channel (near Sehagori bridge) two nos (2) location, left bank of short cut Diversion channel(near Sehagori bridge), left bank of short cut Diversion channel(near Saoria), Buxi(2nd) under Khanakul-II, Bagnan-I &Amta-II Blocks under WBMIFMP.

RFQ No: i) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_1

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iv) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_4

Our Reference: No..... Dated.....

**To: The Additional Project Director -IV
DPMU-II, WBMIFMP
Jalasampad Bhaban (9th Floor),
Bidhannagar, Kolkata- 700 091
West Bengal**

Subject: Soil investigation work in 32 locations in connection with New/Re- construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).

Lot -1: At Sehagori, KamargoriaKharibon, Nayanjuli, SauriaMansatala, Sameswar- I, Chardaha and Satpota-I under Amta-I and II Blocks under WBMIFMP.

Lot-2: At Panchanantala, Penro ,HarishpurGhoshpur, Kanpur, Natungram (Par Kanpur), Santoshnagar, Purash,Kamaria under Amta-I&Udaynarayanpur Blocks under WBMIFMP.

Lot-3: At Gorupora,Tekhala,Chelaghai, Simultala-2, Solbhaga, KharigariaManasatala, Simultala-I, Nakubar under Khanakul-II &Amta-II Blocks under WBMIFMP.

Lot-4: At Chingra, Telirdaha, Balaichak, Right bank of short cut Diversion channel (near Khajurdaha), Right bank of short cut Diversion channel (near Sehagori bridge) two nos (2) location, left bank of short cut Diversion channel(near Sehagori bridge), left bank of short cut Diversion channel(near Saoria), Buxi(2nd) under Khanakul-II, Bagnan-I &Amta-II Blocks under WBMIFMP.

Reference : Letter No.....dated.....from.....

Sir,

1. We, the undersigned, hereby submit our Quotation in two parts, namely:

- (a) Technical Part; and
- (b) Financial Part

2. In submitting our Quotation, we make the following declarations:

- (a) **No reservations:** We have examined and have no reservations to the RFQ document;
- (b) **Conformity:** We offer to execute the subject work in conformity with the RFQ document and in accordance with the Period of Completion specified in Section A.;
- (c) **Quotation Validity Period:** Our Quotation shall be valid for the period of 45 days, from the deadline fixed for the Quotation submission;
- (d) **Eligibility:** Wemeet the eligibility requirements and have no conflict of interest, we are not participating in more than one quotation in this bidding process, and we have not been temporarily suspended or debarred by the World Bank.
- (e) **Fraud and Corruption:** We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of corrupt, fraudulent, collusive, coercive, or obstructive practices.

- (f) **ESHS/GBV Compliance:** We hereby undertake to comply with (i) the applicable Laws/ Rules/ Regulations for protection of environment, public health and safety; (ii) the regulatory authority conditions (if any) attached to any permits or approvals for the project; and (iii) the Management Strategies and Implementation Plan (MSIP) to manage the Environmental, Social (including sexual exploitation and abuse (SEA) and gender based violence (GBV)), Health and Safety (ESHS) risks, and ESHS Code of Conduct, (if any prescribed by the Employer), that will apply to us, our employees and all subcontractors.

Yours faithfully,

Authorized Signature : Date: _____

Name & Title of Signatory : _____

In the capacity of *[insert legal capacity of person signing the Letter of Quotation]*

Name of Bidder : _____

Address : _____

Dated on _____ day of _____, _____ *[insert date of signing]*

* ***To be filled in by the Employer before issue of the Letter of Invitation.***

** ***To be filled in by the Bidder, together with his particulars and date of submission at the bottom of this Form.***

Letter of Quotation–Financial Part

The Bidder must prepare the Letter of Quotation on stationery with its letterhead clearly showing the Bidder's complete name and address. The italicized text is for Bidder's guidance in preparing these forms and shall be deleted from the final products.

Description of the Works- Soil investigation work in 32 locations in connection with New/Re- construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).

Lot -1: At Sehagori, KamargoriaKharibon, Nayanjuli, SauriaMansatala, Sameswar- I, Chardaha and Satpota-I under Amta-I and II Blocks under WBMIFMP.

Lot-2: At Panchanantala, Penro ,HarishpurGhoshpur, Kanpur, Natungram (Par Kanpur), Santoshnagar, Purash,Kamaria under Amta-I&Udaynarayanpur Blocks under WBMIFMP.

Lot-3: At Gorupora,Tekhala,Chelaghai, Simultala-2, Solbhaga, KharigariaManasatala, Simultala-I, Nakubar under Khanakul-II &Amta-II Blocks under WBMIFMP.

Lot-4: At Chingra, Telirdaha, Balaichak, Right bank of short cut Diversion channel (near Khajurdaha), Right bank of short cut Diversion channel (near Sehagori bridge) two nos (2) location, left bank of short cut Diversion channel(near Sehagori bridge), left bank of short cut Diversion channel(near Saoria), Buxi(2nd) under Khanakul-II, Bagnan-I &Amta-II Blocks under WBMIFMP.

RFQ No: i) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_1

ii) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_2

iii) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_3

iv) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_4

Our Reference: No..... Dated.....

**To: The Additional Project Director -IV
DPMU-II, WBMIFMP
Jalasampad Bhaban (9th Floor),
Bidhannagar, Kolkata- 700 091
West Bengal**

Subject: Soil investigation work in 32 locations in connection with New/Re- construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).

Lot -1: At Sehagori, KamargoriaKharibon, Nayanjuli, SauriaMansatala, Sameswar- I, Chardaha and Satpota-I under Amta-I and II Blocks under WBMIFMP.

Lot-2: At Panchanantala, Penro ,HarishpurGhoshpur, Kanpur, Natungram (Par Kanpur), Santoshnagar, Purash,Kamaria under Amta-I&Udaynarayanpur Blocks under WBMIFMP.

Lot-3: At Gorupora,Tekhala,Chelaghai, Simultala-2, Solbhaga, KharigariaManasatala, Simultala-I, Nakubar under Khanakul-II &Amta-II Blocks under WBMIFMP.

Lot-4: At Chingra, Telirdaha, Balaichak, Right bank of short cut Diversion channel (near Khajurdaha), Right bank of short cut Diversion channel (near Sehagori bridge) two nos (2) location, left bank of short cut Diversion channel(near Sehagori bridge), left bank of short cut Diversion channel(near Saoria), Buxi(2nd) under Khanakul-II, Bagnan-I &Amta-II Blocks under WBMIFMP.

Sir,

1. We, the undersigned, hereby submit the second part of our Quotation, the Financial Part including the Quotation Price and Bill of Quantities. In submitting our Financial Part we make the following additional declarations:

(a) **Validity:** Our Quotation shall be valid for the period of 120 days from the deadline fixed for the Quotation submission;

(b) **Quotation Price:** The total price of our Quotation including any unconditional discounts, offered in accordance with the Conditions of Contract is at percentage above / below the estimated rates, i.e., for a total Contract Price of –

Rs.** _____ [in figures]

Rs. _____ [in words];

(c) **Commissions, gratuities and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity. If none has been paid or is to be paid, indicate "none."]*

Yours faithfully,

Authorized Signature

Name & Title of Signatory _____

In the capacity of *[insert legal capacity of person signing the Letter of Quotation]*

Name of Bidder _____

Address _____

Dated on _____ day of _____, _____ *[insert date of signing]*

To be filled in by the Employer before issue of the Letter of Invitation.

****** *To be filled in by the Bidder, together with his particulars and date of submission at the bottom of this Form.*

**LETTER OF ACCEPTANCE
CUM NOTICE TO PROCEED WITH THE WORK
(LETTERHEAD OF THE EMPLOYER)**

Dated: _____

To: _____ [Name and address of the Contractor]

Dear Sirs,

This is to notify you that your quotation dated _____ for execution of the _____ for the contract price of Rupees _____ [amount in words and figures], is hereby accepted by us.

You are hereby requested to furnish performance security for an amount of Rs. _____ (equivalent to 3% of the contract price) within 15 days of the receipt of the letter. The Performance Security in the form of Bank guarantee or a Bank draft in favour of..... (Employer) shall be valid till the expiry of the period of maintenance i.e. up to _____. Failure to furnish the Performance Security will entail cancellation of the award of contract.

You are also requested to sign the agreement form and proceed with the work not later than _____ under the instructions of the Engineer, _____ and ensure its completion within the contract period.

With the issuance of this acceptance letter and your furnishing the required Performance Security, the contract, for the above said work, stands concluded.

Yours faithfully,

**Authorized Signature
Name and title of Signatory of Employer**

Draft Contract Agreement form for Construction through National Shopping

ARTICLES OF CONTRACT AGREEMENT

1.0 This deed of agreement is made in the form of agreement on _____ day _____ month _____ 20____, between the _____ (Employer) or his authorized representative (hereinafter referred to as the first party) and _____ (Name of the Contractor), S/O _____ resident of _____ (hereinafter referred to as the second party), to execute the work of construction of _____ (hereinafter referred to as works) on the following terms and conditions.

2.0 Contract Price

The total Contract Price for the works (hereinafter referred to as the “total price”) is Rs. _____ as reflected in Annexure - 1.

3.0 Payments under its contract:

Payments to the second party for the construction work will be released by the first party in the following manner:-

- 3.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously for a minimum value of executed works of INR 5.00 Lakhs.
- 3.2 The Project Manager shall check the Contractor’s monthly statement and certify the amount to be paid to the Contractor.
- 3.3 The value of work executed shall be determined by the Project Manager.
- 3.4 The value of work executed shall comprise the value of the quantities of work in the Bill of Quantities that have been completed.²
- 3.5 The value of work executed shall include the valuation of Variations and Compensation Events.
- 3.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
- 3.7 If the Contractor was, or is, failing to perform any ES obligations or work under the Contract, the value of this work or obligation, as determined by the Project Manager, may be withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the Project Manager, may be withheld until rectification or replacement has been completed. Failure to perform includes, but is not limited to the following:

²

In lump-sum contracts, replace this paragraph with the following: “The value of work executed shall comprise the value of completed activities in the Activity Schedule.”

- (a) failure to comply with any ES obligations or work described in the Works' Requirements which may include: working outside site boundaries, excessive dust, failure to keep public roads in a safe usable condition, damage to offsite vegetation, pollution of water courses from oils or sedimentation, contamination of land e.g. from oils, human waste, damage to archaeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion;
- (b) failure to implement remediation as instructed by the Project Manager within the specified timeframe (e.g. remediation addressing non-compliance/s).

Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 28 days of the date of each certificate. The proportion of payments retained (**Retention Money**) shall be **6% from each bill subject to the maximum of 5% of final contract price**. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for

On signing of agreement	:	10% of total cost, as interest free advance against receipt of an unconditional bank guarantee from the Contractor for an equivalent amount valid up to the Intended Completion Date, in the format attached.
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3.8 Payments at each stage will be made by the first party:

- (a) on the second party submitting an invoice for an equivalent amount;
- (b) on certification of the invoice (except for the first installment) by the engineer nominated by the first party with respect to quality/quantity of works executed in the format in Annexure - 2; and
- (c) upon proper and justified utilization of at least 50 % of the previous installment and 100 % of any prior installment.
- (d) Payments shall be adjusted for deductions for advance payments, recoveries if any in terms of the contract, and taxes at source, as applicable under the law.
- (e) The advance (if availed by the contractor) shall be repaid with percentage deductions from the interim payments, commencing with the next Interim Payment at the rate of 20 percent of the amounts of all Interim Payment Certificates until the advance has been repaid, provided that the advance shall be completely repaid prior to the expiry of the Intended Completion Date. The Bank Guarantee shall remain effective until the advance payment has been fully repaid.

4.0 Notice by Contractor to Engineer

The second party, on the works reaching each stage of construction, issue a notice to the first party or the Engineer nominated by the first party (who is responsible for supervising the contractor, administering the contract, certifying the payments due to the contractor, issuing and valuing variations to the contract, awarding extensions of time etc.), to visit the site for certification of stage completion. Within 15 days of the receipt of such notice, the first party or the engineer nominated by it, will ensure issue of stage completion certificate after due verification.

5.0 Completion time

The works should be completed in **Three months** from the date of this Agreement. In exceptional circumstances, the time period stated in this clause may be extended in writing by mutual consent of both the parties.

6.0 If any of the compensation events mentioned below would prevent the work being completed by the intended completion date, the first party will decide on the intended completion date being extended by a suitable period:

(a) The first party does not give access to the site or a part thereof by the agreed period.

(b) The first party orders a delay or does not issue completed drawings, specifications or instructions for execution of the work on time.

(c) Ground conditions are substantially more adverse than could reasonably have been assumed before issue of letter of acceptance and from information provided to second party or from visual inspection of the site.

(d) Payments due to the second party are delayed without reason.

(e) Certification for stage completion of the work is delayed unreasonably.

7. Any willful delay on the part of the second party in completing the construction within the stipulated period will render him liable to pay liquidated damages@Rs.1048.00 per day which will be deducted from payments due to him. The first party may cancel the contract and take recourse to such other action as deemed appropriate once the total amount of liquidated damages exceeds 3 % of the contract amount.

(Note: The amount of liquidated damages per day should be determined between 0.05 to 0.1% of the contract value of the works per day and indicated here).

8.0 Duties and responsibilities of the first party

8.1 The first party shall be responsible for providing regular and frequent supervision and guidance to the second party for carrying out the works as per specifications. This will include written guidelines and regular site visit of the authorized personnel of the first party, for checking quality of material and construction to ensure that it is as per the norms.

8.2 The first party shall supply 3 sets of drawings, specifications and guidelines to the second party for the proposed works.

8.3 Possession of the site will be handed over to the second party within 10 days of signing of the agreement.

8.4 The Engineer or such other person as may be authorized by the first party shall hold meeting once in a month where the second party or his representative at site will

submit the latest information including progress report and difficulties if any, in the execution of the work. The whole team may jointly inspect the site on a particular day to take stock of activities.

- 8.5** The Engineer shall record his observations/instructions at the time of his site visit in a site register maintained by the second party. The second party will carry out the instructions and promptly rectify any deviations pointed out by the engineer. If the deviations are not rectified, within the time specified in the Engineer's notice, the first party as well as the engineer nominated by it, may instruct stoppage or suspension of the construction. It shall thereupon be open to the first party or the engineer to have the deviations rectified at the cost of the second party.

9.0 Duties and responsibilities of the second party

- 9.1** The second party shall:

- (a) take up the works and arrange for its completion within the time period stipulated in Clause 5;
- (b) employ suitable skilled persons to carry out the works;
- (c) regularly supervise and monitor the progress of work;
- (d) abide by the technical suggestions/direction of supervisory personnel including engineers etc. regarding related work;
- (e) be responsible for bringing any discrepancy to the notice of the representative of the first party and seek necessary clarification;
- (f) ensure that the work is carried out in accordance with specifications, drawings and within the total of the contract amount without any cost escalation;
- (g) keep the first party informed about the progress of work;
- (h) be responsible for all security and watch and ward arrangements at site till handing over of the building to the first party; and
- (i) Maintain necessary insurance against loss of materials/cash, etc. or workman disability compensation claims of the personnel deployed on the works as well as third party claims.
- (j) Pay all duties, taxes and other levies payable by executing agencies as per law under the contract (First party will effect deduction (TDS) from running bills in respect of such taxes as may be imposed under the law).
- (k) All Test Report must be countersigned by the Project Manager/Project Management Consultant, who is the Engineer of this Project.

10.0 Variations / Extra Items

The works shall be carried out by the second party in accordance with the approved drawings and specifications. However, if, on account of site conditions or any other factors, variations are considered necessary, the following procedure shall be followed:-

- (a) The second party shall provide the Engineer with a quotation for carrying out the Variation when requested to do so by the Engineer. The Engineer shall assess the quotation, which shall be given within seven days of the request before the Variation is ordered.
- (b) If the quotation given by the second party is unreasonable, the Engineer may order the Variation and make a change to the Contract Price which shall be based on Engineer's own forecast of the effects of the Variation on the Contractor's costs.
- (c) The second party shall not be entitled to additional payment for costs which could have been avoided by giving early warning.

11.0 Securities

The Performance Security (Bank Guarantee from a Nationalized or Scheduled Bank in India in the format attached) shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Employer. The Performance Security shall be valid until a date 28 days from the date of issue of the Certificate of Completion in the case of a Bank Guarantee.

12.0 Termination

12.1 The Employer may terminate the Contract if the other party causes a fundamental breach of the Contract.

12.2 Fundamental breaches of Contract include, but shall not be limited to the following:

- (a) the contractor stops work for 28 days and the stoppage has not been authorized by the Engineer;
- (b) the Contractor has become bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
- (c) the Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
- (d) the Contractor does not maintain a security which is required;
- (e) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the Clause 7 of this agreement

12.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.

12.4 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

13.0 Payment upon Termination

13.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done less

advance payments received up to the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law.

- 13.2** If the Contract is terminated at the Employer's convenience, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

14.0 Dispute settlement

If over the works, any dispute arises between the two parties, relating to any aspects of this Agreement, the parties shall first attempt to settle the dispute through mutual and amicable consultation.

In the event of agreement not being reached, the matter will be referred for arbitration by a Sole Arbitrator not below the level of retired Superintending Engineer, PWD to be appointed by the first party. The Arbitration will be conducted in accordance with the Arbitration and Conciliation Act, 1996. The decision of the Arbitrator shall be final and binding on both the parties. The Arbitrator shall give his award/decision within 60 days of start of proceedings.

The Priced Bill of Quantities (Annexure 1), Format of Certificate (Annexure 2) and Specification and Drawings (Annexure 3) are attached.

Signed and delivered by Sri. _____ for and on
behalf of the Contractor
In the presence of the Witness:

- i)
- ii)

SIGNATURE

Signed and delivered by Sri _____ Deputy Executive Engineer/Executive
Engineer/Superintending Engineer _____ of _____ for
an on behalf of the Government.

In the presence of the Witness:

- i)
- ii)

BILL OF QUANTITIES

RFQ No: WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_1

Name of work: Soil investigation work in 32 locations in connection with New/Re-construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).

Lot -1: At Sehagori, KamargoriaKharibon, Nayanjuli, SauriaMansatala, Sameswar- I, Chardaha and Satpota-I under Amta-I and II Blocks under WBMIFMP.

Sl. No.	Description of Work	Quantity	Unit	Estimated Rate/ Cost		Amount (in Rupees)
				In figure (Rs.)	In Words (Rupees)	
1	Mobilisation Charges of all tools & Plants along with accessories, material, labour, supervision etc. at site of work required in connection with boring and testing work, including setting up boring rigs and shifting to different Bore-hole points etc. and also including withdrawal of same from the site after completion of work, complete as per direction of Engineer-in-Charge. Note: Payment will be made after successful completion of the work. b) Detailed Investigation	7.00	LS	29,795.00	INR Twenty Nine Thousand Seven Hundred Ninety Five Only	2,08,565.00
2	Carriage of all Disturbed & Undisturbed Samples from site of work to the Divisional office or elsewhere including loading and unloading as per direction of Engineer-in-Charge. Detailed Investigation. Note: Some samples are to be kept at Sub-Division Office for Additional testing By the Engineer-in-Charge.	7.00	LS	1,906.88	INR One Thousand Nine Hundred Six and Paise Eighty Eight Only	13,348.16
3	Labour for making Bore-Holes of 150mm to 250mm dia. by any standard method to any depth below ground level / bed level in all kinds of soil like clay, silt, sand, stiff clay, mixed soils etc. except rocks (for the purpose of collecting Disturbed & Undisturbed soil samples, conducting Standard Penetration Test at suitable intervals etc.) including preparation and submission of bore-log as per IRC : 75 and 78 and Clause 2400 of Specifications for Road & Bridge Works (5th Revision), Published by IRC, and also including hire charges of tools and plants complete as per the direction of Engineer-in-Charge. a) When Casing pipe is used to prevent collapse of bore hole (casing pipe to be					

	finally withdrawn)					
3.01	(i) Depth 0m to 10m	140.00	metre	405.21	INR Four Hundred Five and Paise Twenty One Only	56,729.40
3.02	(ii) Depth greater than 10m and up to 20m	140.00	metre	476.72	INR Four Hundred Seventy Six and Paise Seventy Two Only	66,740.80
3.03	(iii) Depth greater than 20m and up to 30m	140.00	metre	560.15	INR Five Hundred Sixty and Paise Fifteen Only	78,421.00
4	A. Laboratory Investigation: i) Liquid Limit as per IS 2720 (Part – V).	126.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	52,558.38
4.01	ii) Plastic Limit as per IS 2720 (Part – V)	126.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	52,558.38
4.02	iii) Grain size analysis by Sieving as per IS 2720 (Part – IV).	126.00	each	631.65	INR Six Hundred Thirty One and Paise Sixty Five Only	79,587.90
4.03	iv) Grain size analysis by Hydrometer Method as per IS 2720 (Part – IV)	126.00	each	822.34	INR Eight Hundred Twenty Two and Paise Thirty Four Only	1,03,614.84
4.04	v) Determination of Water Content as per IS 2720 (Part – II).	126.00	each	166.85	INR One Hundred Sixty Six and Paise Eighty Five Only	21,023.10
4.05	vi) Determination of Specific Gravity as per IS 2720 (Part – III).	126.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	69,076.98
4.06	viii) Determination of Unconfined Compression Strength as per IS 2720 (Part – X). a) Undisturbed.	126.00	each	822.34	INR Eight Hundred Twenty Two and Paise Thirty Four Only	1,03,614.84
4.07	xiv) Determination of Consolidation Properties as per IS 2720 (Part – XIV).	126.00	each	1,096.46	INR One Thousand Ninety Six and Paise Forty Six Only	1,38,153.96
4.08	xvi) Triaxial Shear Test a) Determination of Shear strength Parameters of a specimen tested in Unconsolidated Undrained Tri-axial	126.00	each	1,096.46	INR One Thousand Ninety Six and Paise Forty Six Only	1,38,153.96

	compression without measurement of pore water pressure as per IS 2720 (Part – XI).					
4.09	xxvii) Determination of Free Swell Index of Soil as per IS 2720 (Part– VIII).	42.00	each	548.23	INR Five Hundred FortyEight and Paise Twenty Three Only	23,025.66
4.10	B Field Investigation: (iii) Collection of Samples from the bore hole made as per B-a (a) Undisturbed	84.00	Per sample	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	35,038.92
4.11	Standard Penetration Tests (S.P.T.) by Split Spoon Sampler in the bore hole as per IS 2131. (i) 0.0m to 10.0m	126.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	52,558.38
4.12	(ii) 10.0m to 20.0m	126.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	69,076.98
4.13	(iii) 20.0m - 30.0m	126.00	each	679.33	INR Six Hundred Seventy Nine and Paise Thirty Three Only	85,595.58
5	Labour for boring by sinking and finally withdrawing 50mm to 100mm dia. (internal) pipe by a standard method to any depth below ground level / bed level in all types of soil like clay, silt, sand, stiff clay, mixed soils etc. except rocks, including collection of disturbed soil samples and including preparation and submission of bore-log as per standard proforma and also including hire charges of tool and plants complete as per direction of Engineer-in-Charge. C) Extra for boring in water (with depth of Water upto 3.0 m)	7.00	LS	11,322.10	INR Eleven Thousand Three Hundred Twenty Two and Paise Ten Only	79,254.70
6	Preparation and submission of report in 6 (Six) copies, giving all relevant information data like site plan, Bore log and water table, test results, calculations, discussions, suggestions and recommendations in respect of suitable foundation etc. including determination of silt factor calculation of waterways and complete design of foundation including analysis of Bearing Capacities and settlements in bound and presentable form complete as per direction of Engineer-in-Charge. (b) Detailed Investigation	7.00	LS	14,897.50	INR Fourteen Thousand Eight Hundred Ninety Seven and Paise Fifty Only	1,04,282.50

Gross Total Estimated Cost:	Rs.	₹16,30,979.42
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We agree to execute the works in accordance with the approved drawings and technical specifications at percentage above/below the estimated rates, i.e., for a total Contract Price of Rs.(amount in figures) (Rs. amount in words).

Signature of Contractor

(Where there is a discrepancy between the amount in figures and words, the amount in words will prevail)

RFQ No: WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_2

Name of work: Soil investigation work in 32 locations in connection with New/Re-construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).

Lot-2: At Panchanantala, Penro ,HarishpurGhoshpur, Kanpur, Natungram (Par Kanpur), Santoshnagar, Purash,Kamaria under Amta-I&Udaynarayanpur Blocks under WBMIFMP.

Sl. No.	Description of Work	Quantity	Unit	Estimated Rate/ Cost		Amount (in Rupees)
				In figure (Rs.)	In Words (Rupees)	

1	<p>Mobilisation Charges of all tools & Plants along with accessories, material, labour, supervision etc. at site of work required in connection with boring and testing work, including setting up boring rigs and shifting to different Bore-hole points etc. and also including withdrawal of same from the site after completion of work, complete as per direction of Engineer-in-Charge.</p> <p>Note: Payment will be made after successful completion of the work.</p> <p>b) Detailed Investigation</p>	8.00	LS	29,795.00	INR Twenty Nine Thousand Seven Hundred Ninety Five Only	2,38,360.00
2	<p>Carriage of all Disturbed & Undisturbed Samples from site of work to the Divisional office or elsewhere including loading and unloading as per direction of Engineer-in-Charge. Detailed Investigation.</p> <p>Note: Some samples are to be kept at Sub-Division Office for Additional testing By the Engineer-in-Charge.</p>	8.00	LS	1,906.88	INR One Thousand Nine Hundred Six and Paise Eighty Eight Only	15,255.04
3	<p>Labour for making Bore-Holes of 150mm to 250mm dia. by any standard method to any depth below ground level / bed level in all kinds of soil like clay, silt, sand, stiff clay, mixed soils etc. except rocks (for the purpose of collecting Disturbed & Undisturbed soil samples, conducting Standard Penetration Test at suitable intervals etc.) including preparation and submission of bore-log as per IRC : 75 and 78 and Clause 2400 of Specifications for Road & Bridge Works (5th Revision), Published by IRC, and also including hire charges of tools and plants complete as per the direction of Engineer-in-Charge.</p> <p>a) When Casing pipe is used to prevent collapse of bore hole (casing pipe to be finally withdrawn)</p>					
3.01	(i) Depth 0m to 10m	160.00	metre	405.21	INR Four Hundred Five and Paise Twenty One Only	64,833.60
3.02	(ii) Depth greater than 10m and up to 20m	160.00	metre	476.72	INR Four Hundred Seventy Six and Paise Seventy Two Only	76,275.20
3.03	(iii) Depth greater than 20m and up to 30m	160.00	metre	560.15	INR Five Hundred Sixty and Paise Fifteen Only	89,624.00
4	<p>A. Laboratory Investigation:</p> <p>i) Liquid Limit as per IS 2720 (Part – V).</p>	144.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	60,066.72

4.01	ii) Plastic Limit as per IS 2720 (Part – V)	144.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	60,066.72
4.02	iii) Grain size analysis by Sieving as per IS 2720 (Part – IV).	144.00	each	631.65	INR Six Hundred Thirty One and Paise Sixty Five Only	90,957.60
4.03	iv) Grain size analysis by Hydrometer Method as per IS 2720 (Part – IV)	144.00	each	822.34	INR Eight Hundred Twenty Two and Paise Thirty Four Only	1,18,416.96
4.04	v) Determination of Water Content as per IS 2720 (Part – II).	144.00	each	166.85	INR One Hundred Sixty Six and Paise Eighty Five Only	24,026.40
4.05	vi) Determination of Specific Gravity as per IS 2720 (Part – III).	144.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	78,945.12
4.06	viii) Determination of Unconfined Compression Strength as per IS 2720 (Part – X). a) Undisturbed.	144.00	each	822.34	INR Eight Hundred Twenty Two and Paise Thirty Four Only	1,18,416.96
4.07	xiv) Determination of Consolidation Properties as per IS 2720 (Part – XIV).	144.00	each	1,096.46	INR One Thousand Ninety Six and Paise Forty Six Only	1,57,890.24
4.08	xvi) Triaxial Shear Test a) Determination of Shear strength Parameters of a specimen tested in Unconsolidated Undrained Tri-axial compression without measurement of pore water pressure as per IS 2720 (Part – XI).	144.00	each	1,096.46	INR One Thousand Ninety Six and Paise Forty Six Only	1,57,890.24
4.09	xxvii) Determination of Free Swell Index of Soil as per IS 2720 (Part– VIII).	48.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	26,315.04
4.10	B Field Investigation: (iii) Collection of Samples from the bore hole made as per B-a (a) Undisturbed	96.00	Per Sample	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	40,044.48
4.11	Standard Penetration Tests (S.P.T.) by Split Spoon Sampler in the bore hole as per IS 2131. (i) 0.0m to 10.0m	144.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	60,066.72

4.12	(ii) 10.0m to 20.0m	144.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	78,945.12
4.13	(iii) 20.0m - 30.0m	144.00	each	679.33	INR Six Hundred Seventy Nine and Paise Thirty Three Only	97,823.52
5	Labour for boring by sinking and finally withdrawing 50mm to 100mm dia. (internal) pipe by a standard method to any depth below ground level / bed level in all types of soil like clay, silt, sand, stiff clay, mixed soils etc. except rocks, including collection of disturbed soil samples and including preparation and submission of bore-log as per standard proforma and also including hire charges of tool and plants complete as per direction of Engineer-in-Charge. C) Extra for boring in water (with depth of Water upto 3.0 m)	8.00	LS	11,322.10	INR Eleven Thousand Three Hundred Twenty Two and Paise Ten Only	90,576.80
6	Preparation and submission of report in 6 (Six) copies, giving all relevant information data like site plan, Bore log and water table, test results, calculations, discussions, suggestions and recommendations in respect of suitable foundation etc. including determination of silt factor calculation of waterways and complete design of foundation including analysis of Bearing Capacities and settlements in bound and presentable form complete as per direction of Engineer-in-Charge. (b) Detailed Investigation	8.00	LS	14,897.50	INR Fourteen Thousand Eight Hundred Ninety Seven and Paise Fifty Only	1,19,180.00
Gross Total Estimated Cost: Rs.						₹18,63,976.48

We agree to execute the works in accordance with the approved drawings and technical specifications at percentage above/below the estimated rates, i.e., for a total Contract Price of Rs.(amount in figures) (Rs. amount in words).

Signature of Contractor

(Where there is a discrepancy between the amount in figures and words, the amount in words will prevail)

RFQ No: WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_3

Name of work: Soil investigation work in 32 locations in connection with New/Re-construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).

Lot-3: At Gorupora, Tekhala, Chelaghai, Simultala-2, Solbhaga, Kharigaria, Manasatala, Simultala-I, Nakubar under Khanakul-II & Amta-II Blocks under WBMIFMP.

Sl. No.	Description of Work	Quantity	Unit	Estimated Rate/ Cost		Amount (in Rupees)
				In figure (Rs.)	In Words (Rupees)	
1	Mobilisation Charges of all tools & Plants along with accessories, material, labour, supervision etc. at site of work required in connection with boring and testing work, including setting up boring rigs and shifting to different Bore-hole points etc. and also including withdrawal of same from the site after completion of work, complete as per direction of Engineer-in-Charge. Note: Payment will be made after successful completion of the work. b) Detailed Investigation	8.00	LS	29,795.00	INR Twenty Nine Thousand Seven Hundred Ninety Five Only	2,38,360.00

2	Carriage of all Disturbed & Undisturbed Samples from site of work to the Divisional office or elsewhere including loading and unloading as per direction of Engineer-in-Charge. Detailed Investigation. Note: Some samples are to be kept at Sub-Division Office for Additional testing By the Engineer-in-Charge.	8.00	LS	1,906.88	INR One Thousand Nine Hundred Six and Paise Eighty Eight Only	15,255.04
3	Labour for making Bore-Holes of 150mm to 250mm dia. by any standard method to any depth below ground level / bed level in all kinds of soil like clay, silt, sand, stiff clay, mixed soils etc. except rocks (for the purpose of collecting Disturbed & Undisturbed soil samples, conducting Standard Penetration Test at suitable intervals etc.) including preparation and submission of bore-log as per IRC : 75 and 78 and Clause 2400 of Specifications for Road & Bridge Works (5th Revision), Published by IRC, and also including hire charges of tools and plants complete as per the direction of Engineer-in-Charge. a) When Casing pipe is used to prevent collapse of bore hole (casing pipe to be finally withdrawn)					
3.01	(i) Depth 0m to 10m	160.00	metre	405.21	INR Four Hundred Five and Paise Twenty One Only	64,833.60
3.02	(ii) Depth greater than 10m and up to 20m	160.00	metre	476.72	INR Four Hundred Seventy Six and Paise Seventy Two Only	76,275.20
3.03	(iii) Depth greater than 20m and up to 30m	160.00	metre	560.15	INR Five Hundred Sixty and Paise Fifteen Only	89,624.00
4	A. Laboratory Investigation: i) Liquid Limit as per IS 2720 (Part – V).	144.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	60,066.72
4.01	ii) Plastic Limit as per IS 2720 (Part – V)	144.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	60,066.72
4.02	iii) Grain size analysis by Sieving as per IS 2720 (Part – IV).	144.00	each	631.65	INR Six Hundred Thirty One and Paise Sixty Five Only	90,957.60

4.03	iv) Grain size analysis by Hydrometer Method as per IS 2720 (Part – IV)	144.00	each	822.34	INR Eight Hundred Twenty Two and Paise Thirty Four Only	1,18,416.96
4.04	v) Determination of Water Content as per IS 2720 (Part – II).	144.00	each	166.85	INR One Hundred Sixty Six and Paise Eighty Five Only	24,026.40
4.05	vi) Determination of Specific Gravity as per IS 2720 (Part – III).	144.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	78,945.12
4.06	viii) Determination of Unconfined Compression Strength as per IS 2720 (Part – X). a) Undisturbed.	144.00	each	822.34	INR Eight Hundred Twenty Two and Paise Thirty Four Only	1,18,416.96
4.07	xiv) Determination of Consolidation Properties as per IS 2720 (Part – XIV).	144.00	each	1,096.46	INR One Thousand Ninety Six and Paise Forty Six Only	1,57,890.24
4.08	xvi) Triaxial Shear Test a) Determination of Shear strength Parameters of a specimen tested in Unconsolidated Undrained Tri-axial compression without measurement of pore water pressure as per IS 2720 (Part – XI).	144.00	each	1,096.46	INR One Thousand Ninety Six and Paise Forty Six Only	1,57,890.24
4.09	xxvii) Determination of Free Swell Index of Soil as per IS 2720 (Part– VIII).	48.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	26,315.04
4.10	B Field Investigation: (iii) Collection of Samples from the bore hole made as per B-a (a) Undisturbed	96.00	Per sample	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	40,044.48
4.11	Standard Penetration Tests (S.P.T.) by Split Spoon Sampler in the bore hole as per IS 2131. (i) 0.0m to 10.0m	144.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	60,066.72
4.12	(ii) 10.0m to 20.0m	144.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	78,945.12
4.13	(iii) 20.0m - 30.0m	144.00	each	679.33	INR Six Hundred Seventy Nine and Paise Thirty Three Only	97,823.52

5	Labour for boring by sinking and finally withdrawing 50mm to 100mm dia. (internal) pipe by a standard method to any depth below ground level / bed level in all types of soil like clay, silt, sand, stiff clay, mixed soils etc. except rocks, including collection of disturbed soil samples and including preparation and submission of bore-log as per standard proforma and also including hire charges of tool and plants complete as per direction of Engineer-in-Charge. C) Extra for boring in water (with depth of Water upto 3.0 m)	8.00	LS	11,322.10	INR Eleven Thousand Three Hundred Twenty Two and Paise Ten Only	90,576.80
6	Preparation and submission of report in 6 (Six) copies, giving all relevant information data like site plan, Bore log and water table, test results, calculations, discussions, suggestions and recommendations in respect of suitable foundation etc. including determination of silt factor calculation of waterways and complete design of foundation including analysis of Bearing Capacities and settlements in bound and presentable form complete as per direction of Engineer-in-Charge. (b) Detailed Investigation	8.00	LS	14,897.50	INR Fourteen Thousand Eight Hundred Ninety Seven and Paise Fifty Only	1,19,180.00
Gross Total Estimated Cost:						Rs. ₹18,63,976.48

We agree to execute the works in accordance with the approved drawings and technical specifications at percentage above/below the estimated rates, i.e., for a total Contract Price of Rs.(amount in figures) (Rs. amount in words).

Signature of Contractor

(Where there is a discrepancy between the amount in figures and words, the amount in words will prevail)

RFQ No: WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_4

Name of work: Soil investigation work in 32 locations in connection with New/Re-construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).

Lot-4: At Chingra, Telirdaha, Balaichak, Right bank of short cut Diversion channel (near Khajurdaha), Right bank of short cut Diversion channel (near Sehagori bridge) two nos (2) location, left bank of short cut Diversion channel(near Sehagori bridge), left bank of short cut Diversion channel(near Saoria), Buxi(2nd) under Khanakul-II, Bagnan-I & Amta-II Blocks under WBMIFMP.

Sl. No.	Description of Work	Quantity	Unit	Estimated Rate/ Cost		Amount (in Rupees)
				In figure (Rs.)	In Words (Rupees)	
1	Mobilisation Charges of all tools & Plants along with accessories, material, labour, supervision etc. at site of work required in connection with boring and testing work, including setting up boring rigs and shifting to different Bore-hole points etc. and also including withdrawal of same from the site after completion of work, complete as per direction of Engineer-in-Charge. Note: Payment will be made after successful completion of the work. b) Detailed Investigation	9.00	LS	29,795.00	INR Twenty Nine Thousand Seven Hundred Ninety Five Only	2,68,155.00
2	Carriage of all Disturbed & Undisturbed Samples from site of work to the Divisional office or elsewhere including loading and unloading as per direction of Engineer-in-Charge. Detailed Investigation. Note: Some samples are to be kept at Sub-Division Office for Additional testing By the Engineer-in-Charge.	9.00	LS	1,906.88	INR One Thousand Nine Hundred Six and Paise Eighty Eight Only	17,161.92
3	Labour for making Bore-Holes of 150mm to 250mm dia. by any standard method to any depth below ground level / bed level in all kinds of soil like clay, silt, sand, stiff clay, mixed soils etc. except rocks (for the purpose of collecting Disturbed & Undisturbed soil samples, conducting Standard Penetration Test at suitable					

	intervals etc.) including preparation and submission of bore-log as per IRC : 75 and 78 and Clause 2400 of Specifications for Road & Bridge Works (5th Revision), Published by IRC, and also including hire charges of tools and plants complete as per the direction of Engineer-in-Charge. a) When Casing pipe is used to prevent collapse of bore hole (casing pipe to be finally withdrawn)					
3.01	(i) Depth 0m to 10m	180.00	metre	405.21	INR Four Hundred Five and Paise Twenty One Only	72,937.80
3.02	(ii) Depth greater than 10m and up to 20m	180.00	metre	476.72	INR Four Hundred Seventy Six and Paise Seventy Two Only	85,809.60
3.03	(iii) Depth greater than 20m and up to 30m	180.00	metre	560.15	INR Five Hundred Sixty and Paise Fifteen Only	1,00,827.00
4	A. Laboratory Investigation: i) Liquid Limit as per IS 2720 (Part – V).	162.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	67,575.06
4.01	ii) Plastic Limit as per IS 2720 (Part – V)	162.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	67,575.06
4.02	iii) Grain size analysis by Sieving as per IS 2720 (Part – IV).	162.00	each	631.65	INR Six Hundred Thirty One and Paise Sixty Five Only	1,02,327.30
4.03	iv) Grain size analysis by Hydrometer Method as per IS 2720 (Part – IV)	162.00	each	822.34	INR Eight Hundred Twenty Two and Paise Thirty Four Only	1,33,219.08
4.04	v) Determination of Water Content as per IS 2720 (Part – II).	162.00	each	166.85	INR One Hundred Sixty Six and Paise Eighty Five Only	27,029.70
4.05	vi) Determination of Specific Gravity as per IS 2720 (Part – III).	162.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	88,813.26
4.06	viii) Determination of Unconfined Compression Strength as per IS 2720 (Part – X). a) Undisturbed.	162.00	each	822.34	INR Eight Hundred Twenty Two and Paise Thirty Four Only	1,33,219.08

4.07	xiv) Determination of Consolidation Properties as per IS 2720 (Part – XIV).	162.00	each	1,096.46	INR One Thousand Ninety Six and Paise Forty Six Only	1,77,626.52
4.08	xvi) Triaxial Shear Test a) Determination of Shear strength Parameters of a specimen tested in Unconsolidated Undrained Tri-axial compression without measurement of pore water pressure as per IS 2720 (Part – XI).	162.00	each	1,096.46	INR One Thousand Ninety Six and Paise Forty Six Only	1,77,626.52
4.09	xxvii) Determination of Free Swell Index of Soil as per IS 2720 (Part– VIII).	42.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	29,604.52
4.10	B Field Investigation: (iii) Collection of Samples from the bore hole made as per B-a (a) Undisturbed	108.00	Per sample	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	45,050.04
4.11	Standard Penetration Tests (S.P.T.) by Split Spoon Sampler in the bore hole as per IS 2131. (i) 0.0m to 10.0m	162.00	each	417.13	INR Four Hundred Seventeen and Paise Thirteen Only	67,575.06
4.12	(ii) 10.0m to 20.0m	162.00	each	548.23	INR Five Hundred Forty Eight and Paise Twenty Three Only	88,813.26
4.13	(iii) 20.0m - 30.0m	162.00	each	679.33	INR Six Hundred Seventy Nine and Paise Thirty Three Only	1,10,051.46
5	Labour for boring by sinking and finally withdrawing 50mm to 100mm dia. (internal) pipe by a standard method to any depth below ground level / bed level in all types of soil like clay, silt, sand, stiff clay, mixed soils etc. except rocks, including collection of disturbed soil samples and including preparation and submission of bore-log as per standard proforma and also including hire charges of tool and plants complete as per direction of Engineer-in-Charge. C) Extra for boring in water (with depth of Water upto 3.0 m)	9.00	LS	11,322.10	INR Eleven Thousand Three Hundred Twenty Two and Paise Ten Only	1,01,898.90

6	Preparation and submission of report in 6 (Six) copies, giving all relevant information data like site plan, Bore log and water table, test results, calculations, discussions, suggestions and recommendations in respect of suitable foundation etc. including determination of silt factor calculation of waterways and complete design of foundation including analysis of Bearing Capacities and settlements in bound and presentable form complete as per direction of Engineer-in-Charge. (b) Detailed Investigation	9.00	LS	14,897.50	INR Fourteen Thousand Eight Hundred Ninety Seven and Paise Fifty Only	1,34,077.50
Gross Total Estimated Cost: Rs.						₹20,96,973.54

We agree to execute the works in accordance with the approved drawings and technical specifications at percentage above/below the estimated rates, i.e., for a total Contract Price of Rs.(amount in figures) (Rs. amount in words).

Signature of Contractor

(Where there is a discrepancy between the amount in figures and words, the amount in words will prevail)

Format of certificate

Certified that the works up to ----- stage (as defined in Clause 3.1 of the Agreement) in respect of construction of ----- at ----- have been executed satisfactorily in accordance with the terms and conditions of the agreement and as per approved drawings and technical specifications

Signature
Name & Designation

(Official address)

Place:

Date:

Office seal

1.0 Preamble to the BOQ

1.1 INTRODUCTION

The Bill of Quantities (BOQ) shall be read in conjunction with the Instructions to Bidders, Technical Specifications and Drawings. The rates quoted shall be inclusive of cost of all materials, transportation and carriage of material upto works site, labour, plant and equipment, tools and tackles, safety gadgets, incidentals etc. as may be required for that particular item in the BOQ which is to be read in conjunction in the specification.

The quantities given in the Bill of Quantities are estimated and provisional and are given to provide a common basis for bidding. The basis of payment will be on the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices tendered in the priced Bill of Quantities. If such rates are not available in the Bill of Quantities, this will be treated as extra work and such rates and prices will be fixed by the Engineer / Project Manager as per the terms of the Contract.

Mode of measurement, if not specified elsewhere shall be followed as per available codes of practice published by the Bureau of Indian Standards (BIS).

The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the contract, include all temporary facilities, access, notices to maintain traffic prevailing in an accessible manner, as far as possible for similar flow existing and also including all construction of plant, labour, supervision, materials, erection, maintenance, insurance, overhead, profit, taxes and duties together with all general risk, liabilities and obligation set out or implied in the contract.

General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. The Bidder must refer to the relevant sections of the bid documents including specifications, data sheets and drawings before quoting rates in the Bill of Quantities.

The Team Leader of the Project Management Consultant (PMC) – WBMIFMP will be engaged as the Project Manager. For the purpose of this contract, the Project Manager or Engineer or Engineer – In – Charge will have the same meaning and connotation.

2.0 GENERAL

2.1 General Basis for Pricing,

2.1.1 The Bidder shall be deemed to have read and examined the Bid Documents as well as inspected the project site thoroughly to conceive the work in totality to quote against each item of work as given in the BOQ.

2.1.2 The Bidder shall be deemed to be fully conversant with the site conditions and the nature and complexity of the work to be undertaken and taking into

account all eventualities which can arise before, during and after project execution.

2.1.3 It is to be expressly understood that the measured work is to be taken net (not withstanding any system or practice to the contrary) according to the actual quantities finished according to the drawings or as may be ordered from time to time by the Engineer and the cost calculated for the respective prices. Necessary manpower will have to be provided by the Contractor during measurement of works and setting out alignment of the works, for which no extra payment will be made.

2.1.4 Unless otherwise stated, all items shall be measured as executed as per drawing and specification and no allowance will be made for wastage, working space, bulking or shrinkage, and the like.

2.1.5 The quoted rates and prices shall also be inclusive of communication system vehicles for movement at site etc. No extra cost against such items will be paid.

3.0 Miscellaneous

- 3.1** Temporary power connections, telephones, construction and drinking water shall be arranged by the Contractor at his own cost and shall be deemed to be included in their quoted rates. Alternative power arrangement shall be made by Contractor without any extra charge.
- 3.2** All underground and over ground utility items shall have to be suitably supported during the construction phase by the Contractor so that the existing utility services are not damaged. No extra payment will be made on this account.
- 3.3** The Contractor shall keep plumbers, technicians and electricians ready for repair/ shifting of existing underground/ over ground utilities and for crisis management.
- 3.4** During progress of work, convenient access to adjacent premises shall be made by the Contractor. No extra payment will be made on this account.
- 3.5** For speedy progress of work in case of exigency, Contractor may have to do work round the clock at the instance of the Engineer/Project Manager. Arrangement for lighting and other safety requirements shall have to be done for night working. No extra payment shall be made to the Contractor except the items provided in the BOQ.
- 3.6** The rates quoted by the Contractor shall, unless otherwise specified, also include compliance of/ supply of the following:
 - i) General works such as setting out, clearance of site before setting out and clearance of works after completion.
 - ii) A detailed programme for the construction and completion of the work.
 - iii) Samples of various materials proposed to be used on the work for conducting tests thereon as required as per the provisions of the Contract.

- iv) Any other item of work which is not specially provided in the Bill of Quantities (BOQ) but which is necessary for complying with the provisions of the Contract.
- v) All temporary works, formwork and false work.
- vi) Arrangement of a laboratory with facilities for testing and testing of various items of works as specified in relevant clauses.
- vii) Cost of in-built provisions for Quality Assurance.
- viii) Cost of labour hutment, site office.

3.8 Extra items of work – If during the progress of work any extra items need to be carried out, which in the opinion of the Engineer/ Project Manager is essentially required to be executed, then the extra item shall be analyzed as follows:

- i) Derived from rates of similar items of works stated in the tendered offer
- ii) In the event an extra item of work that cannot be derived from (i) above, the rates of extra / new items are to be analysed considering current market rates of all components including 8% overhead and 10% Contractor's profit and duly approved by the Project Manager.
- iii) If not specifically indicated in the items themselves, the rates appearing in this schedule are inclusive of cost of all supply, carriage, handling, fitting, fixing, toll charges, ferry charges etc. and all other incidental works involved in any floor, at any level including all necessary jointing materials, scaffolding to any height, hire charges of tools and plants, and all helping materials.

. Terms of Reference

Government of West Bengal West Bengal Major Irrigation and Flood Management Project (WBMIFMP)

Terms of Reference (TOR) for

Soil investigation work in 32 locations in connection with New/Re- construction of sluices in different Blocks under Howrah & Hooghly District under WBMIFMP; (FM Package – XI, comprising 4 Lots).

Lot -1: At Sehagori, KamargoriaKharibon, Nayanjuli, SauriaMansatala, Sameswar- I, Chardaha and Satpota-I under Amta-I and II Blocks under WBMIFMP.

Lot-2: At Panchanantala, Penro ,HarishpurGhoshpur, Kanpur, Natungram (Par Kanpur), Santoshnagar, Purash,Kamaria under Amta-I&Udaynarayanpur Blocks under WBMIFMP.

Lot-3: At Gorupora,Tekhala,Chelaghai, Simultala-2, Solbhaga, KharigariaManasatala, Simultala-I, Nakubar under Khanakul-II &Amta-II Blocks under WBMIFMP.

Lot-4: At Chingra, Telirdaha, Balaichak, Right bank of short cut Diversion channel (near Khajurdaha), Right bank of short cut Diversion channel (near Sehagori bridge) two nos (2) location, left bank of short cut Diversion channel(near Sehagori bridge), left bank of short cut Diversion channel(near Saoria), Buxi(2nd) under Khanakul-II, Bagnan-I &Amta-II Blocks under WBMIFMP.

RFQ No: i) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_1

ii) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_2

iii) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_3

iv) WBMIFMP/APD-IV/DPMU-II/NCB-01/22-23/GEOTECHNICAL_FM_XI_LOT_4

1.0 Background

The Government of India has received financing of USD 290 million from the International Bank for Reconstruction and Development (IBRD) and Asian Infrastructure Investment Bank (AIIB) towards the cost of the **West Bengal Major Irrigation and Flood Management Project (WBMIFMP)** and intends to apply a part of the proceeds toward eligible payments under the contracts for Civil works as well as Consultancy Services. The sub-the borrower is the Irrigation & Waterways Department, Government of West Bengal.

WBMIFMP aims to improve the existing irrigation network in the Damodar Valley Command Area (DVCA) within the State of West Bengal, optimize conjunctive and sustainable use of ground and surface water across the DVCA in different irrigation seasons, and reduce flooding in the Lower Damodar Sub-Basin (LDSB) in West Bengal.

The duration of the project as envisaged now is 5 (five) years. The Project is being executed by the Irrigation and Waterways Department (IWD), the Government of West Bengal (GoWB) located in Kolkata, and the State Project Management Unit (SPMU) is implementing agency/employer (SPMU, IWD). The support of the Project Management Consultant (PMC) will be at the PMU at various levels viz the State Project Management Unit (SPMU), the District Project Management Units (DPMUs), and the District Project Implementation Units (DPIUs) and is expected to fully compliment the PMU in the execution of the Project in all aspects under the overall control of the IWD at the PMU. The Consultant may note that the execution of the Project will be decentralized with District Units of IWD and the support will extend to the field units as well.

2.0 Overview of the Project

The Damodar River originates from the Chhotanagpur Plateau at Latehar District in Jharkhand and flows through the districts of Latehar, Hazaribagh in Jharkhand, and enters Purulia District in West Bengal which is the lowermost riparian State in Damodar Basin. Five reservoirs have been built on the Damodar and its tributaries in Jharkhand to moderate floods in the lower basin area in West Bengal and for irrigation. These are operated by Damodar Valley Corporation (DVC). The Damodar River bifurcates into two main branches, i.e. Mundeswari and Lower Damodar (Amta Channel) near the border of Burdwan and Hooghly Districts, and both the channels traverse through the districts of Hooghly and Howrah, and ultimately meet River Hooghly, which debouches into Bay of Bengal.

3.0 Project Area:

The project area considering both irrigation and flood management aspects is as follows:

Irrigation Management:

Northern Boundary: River Ajoy at Parulia, Block Katwa-I, District Burdwan (Latitude 23°38'51"N).

Southern Boundary: Outfall of Nabinbabur Khal at Block Amta-I, District Howrah (Latitude 22°35'47"N).

Western Boundary: Durgapur Barrage on river Damodar at Block Barjora, District Bankura (Longitude 87°18'13"E).

Eastern Boundary: Howrah Burdwan Main Line of Eastern Railway at Nityanandapur, Block Balagarh, District Hooghly (Longitude 88°25'17"E)

Flood Management:

Northern Boundary: Bifurcation point of river Damodar into Mundeswari River and Amta Channel at Beguahana, Block Jamalpur, District Burdwan (Latitude 23°08'8.34"N).

Southern Boundary: Outfall of Amta Channel in river Hooghly, Block Shyampur-I, District Howrah (Latitude 22°20'59.76"N).

Western Boundary: Ichhapur at Block Khanakul-I, District Hooghly (Longitude 87°45'0.43"E).

Eastern Boundary: River Saraswati at Eklakhi, Block Chanditala-II, District Hooghly (Longitude 88°16'33.89"E).

The schematic drawing, brief project outlay, location, and other particulars are available on the website www.wbiwd.gov.in in the link "WBMIFMP".

4.0 Project Components

The project is structured under the following Components:

Component A: Irrigation Management - The component includes the following subcomponents: (i) Establishment of MIS, (ii) Improving the Quality-of-Service Delivery, (iii) Aquifer Management, and (iv) Capacity Strengthening.

Component B: Modernization of Irrigation Infrastructure - This component will invest in the modernization of irrigation infrastructure of the main (level 1), branch (level 2), distributary (level 3), and minor and sub-minor canals (level 4). Structural interventions on the canals include: desilting and reforming (restore shape and bank height) of selected canal sections across all canal levels; canal lining of unstable canal sections to ensure renewed canal section stability and hydraulic capacity; rehabilitating existing damaged flow control structures to restore and/or improve function, including measures to address foundation scour, structural degradation and mechanical wear; improved irrigation management by real-time flow data collection through sensors and mobile app to serve as inputs in the decision support system and to perform need-based operation to ensure need-based and equitable distribution of canal water at the entry point of *chaks*; improving of outlet structures (fully closeable and lockable), further ensure need-based supply and to avoid water wastage; and improving weirs and drop structures and arrangement of tail regulation as needed to maintain operational head in canals; sub-surface pressurized pipe systems that will deliver water to faucets on each plot; and cross regulator construction.

Component C: Flood management - This Component will invest in structural measures to reduce flooding in the Project area. Structural measures will include investments to ensure that the flood flow discharge is more evenly shared between the Mundeswari and Amta Channels. Increasing flood discharge capacity in Mundeswari requires dredging to restore/increase the low flow to moderate flood discharge capacity to reduce/limit peak discharge that will be shared in the Amta for all flood events.

Component D: Project Management - This component will strengthen the capacity of the Project Management Unit set up for management of the project, monitoring and evaluation (M&E) (including, inter alia, the areas of procurement and financial management) through the provision of inventories, consultant services, training, and financing of incremental operating costs. Intermediate results indicators include the number of Project monitoring reports submitted on time annually. This component will (i) finance the preparation of several technical studies.

5.0 Implementation Arrangements

Project Implementation Arrangement within the Govt. of West Bengal:

At the State level, a Technical Steering Committee (SLTSC) headed by the Chief Secretary, Govt. of West Bengal has been established and consists of the Heads of all concerned Departments. The SLTSC will review preparation and implementation progress, coordinate between Departments and provide guidance on policy matters

IWD Govt. of WB is responsible for project implementation. It has set up a State Project Management Unit (SPMU) headed by a Project Director (PD) / Chief Engineer of the IWD. The PD is supported by two Additional PDs / Superintending Engineer (SEs), 4 Deputy PDs / Executive Engineers (EEs), Accounts Officials and other support staff. Nodal officers from the Agriculture, Agri-Marketing, Fisheries, Horticulture & Food Processing Industries and Water Resources Investigation and Development Department (WRIDD) are members (Associated Departments) of the SPMU. At the district level, two District Project Management Units (DPMUs) have been established (one for Howrah and Hooghly, and one for Bankura and Burdwan) for coordination and monitoring which are headed by Additional Project Directors. The DPMUs are functional with a skeleton staffing structure. Other implementing departments will also be represented in the DPMUs by concerned district-level officials. During project implementation, project components and sub-components execution will be overseen by the District Project Implementation Units (DPIUs) headed by the Deputy Project Directors/Executive Engineers in case of IWD and by other appropriate district level officers of associated departments. While the DPIUs of IWD will be full-time dedicated staff, such DPIUs of associated Departments will implement project components in addition to their own duties.

6.0 Sub-Project launched:

The Irrigation & Waterways Department has launched 10 civil work packages under component C for flood protection measures on Damodar Left Embankment and Damodar Right Dwarf Embankment, Upper Rampur Khal Left Embankment, Hurhura Khal Left Embankment, desiltation of Mundeswari River, desiltation of Madaria Khal and desiltation of Roner Khal. The said 10 civil work sub-project covers mainly Howrah and Hooghly and part of the Purba Bardhaman district.

7.0 Objective of this Assignment:

There are numerous sluices in the sub-basin of the Lower Damodar area in the districts of Howrah & Hooghly and most of the sluices have been substantially degraded due to a lack of adequate maintenance over the decades. Accordingly, Re-construction, Re-habilitation, or Re-modeling measures in terms of increasing the number of vents or widening the vents of the sluices are proposed to restore the design capacity for smoothing out falling of flood discharge into the main course of the drainage channel under Component C i.e., Flood Management.

The objective of this assignment is to carry out a detailed topographical survey at the sluice locations and to obtain sufficient geotechnical information & data on the underlying strata for deciding upon the type of treatment in the foundation of these structures.

8.0 Scope of the work:

The scope of the work is to carry out a detailed topographical survey & geotechnical investigation of the following structures.

Table : List of Structures to be Reconstructed

Sl. No.	Location	Name of Khal/ River	Block	District	Latitude	Longitude	No. of vent
1	Sehagori	Left bank of Lower Rampur	Amta – II	Howrah	22°34'44" N	87°57'13" E	01
2	Kamargoria Kharibon	Left bank of Lower Rampur	Amta – II	Howrah	22°34'22" N	87°57'12" E	01
3	Nayanjuli	Left bank of Lower Rampur	Amta – II	Howrah	22°32'30" N	87°57'03" E	01
4	Sauria Mansatala	Right bank of Lower Rampur	Amta – II	Howrah	22°33'59" N	87°56'45" E	02
5	Sameswar I	Left bank of River Damodar	Amta – I	Howrah	22°35'48" N	87°59'15" E	01
6	Chardaha	Someswar Khal	Amta – I	Howrah	22°37'10" N	88°00'08" E	01

Sl. No.	Location	Name of Khal/ River	Block	District	Latitude	Longitude	No. of vent
7	Gorupora	Hurhurah Khal	Amta – II	Howrah	22°35'57" N	87°52'16" E	02
8	Chingra	Left bank of Upper Rampur	Khanakul – II	Hooghly	22°32'30" N	87°57'03" E	01
9	Simultala 1	Kuldipi Khal	Amta – II	Howrah	22.584036N	87.8793806 E	02
10	Balaichak	Upper Rampur Khal	Khanakul- II	Hooghly	22.686832 N	87.913255E	01
11	Panchanantala	Left Bank of Madaria	Amta – I	Howrah	22°36'72" N	87°59'15" E	02 (1.80mX1.10m)
12	Penro	Left Bank of Madaria	Udaynaray anpur	Howrah	22°39'23" N	88°01'27" E	01 (1.80mX1.10m)
13	HarishpurGho shpur	Right Bank of Madaria	Udaynaray anpur	Howrah	22°38'27" N	88°00'52" E	02 (1.80mX1.10m)
14	Kanpur	Right Bank of Madaria	Amta – I	Howrah	22°40'56" N	88°01'57" E	02 (1.80mX1.10m)
15	Natungram (Par Kanpur)	Right Bank of Madaria	Amta – I	Howrah	22°40'11" N	88°01'44" E	01 (1.80mX1.10m)
16	Santoshnagar	Right Bank of Madaria	Amta – I	Howrah	22°35'23" N	87°59'52" E	01 (1.80mX1.10m)
17	Buxi (2 nd)	Short Cut Diversion Channel	Bagnan - I	Howrah	22.5246218 N	87.8995989 E	01 (0.9m dia HP)
18	Tekhala	Hurhurah Left Bank	Khanakul II	Hooghly	22°36'43" N	87°52'48" E	02 (1.60mX1.10m)
19	Chelaghai	Hurhurah Left Bank	Khanakul II	Hooghly	22°37'50" N	87°53'22" E	02 (1.60mX1.10m)
20	Simultala - 2	Kuldipi Khal	Amta II	Howrah	22.5841046 N	87.877753 E	02 (1.80mX1.10m)
21	Satpota – 1	Right Bank of Lower Rampur Khal	Amta II	Howrah	22°58'40" N	87°47'59" E	01 (0.6m dia HP)
22	Solbhaga	Hurhurah Left Bank	Amta II	Howrah	22°35'10" N	87°51'35" E	02 (0.9m dia HP)
23	Purash	Madaria Right Bank	Udaynaray anpur	Howrah	22°40'51" N	88°02'06" E	01
24	Telirdaha	Junction of Upper Rampur &Hurhurah	Khanakul- II	Howrah	22°40'58" N	87°54'06" E	04

Sl. No.	Location	Name of Khal/ River	Block	District	Latitude	Longitude	No. of vent
25	Kamaria	Kamaria	Udaynarayanpur	Howrah	22.673954 N	88.029846 E	01
26	Kharigaria Manasatala	Moja Damodar	Amta II	Howrah	22°33'48.758" N	87°54'24.5916" E	-
27	Right Bank of Short Cut Diversion Channel, near Khajurdaha	Short Cut Diversion Channel	Amta II	Howrah	22°33'44.604" N	87°55'30.072" E	02
28	Right Bank of Short Cut Diversion Channel, near Sehagori Bridge	Short Cut Diversion Channel	Amta II	Howrah	22°35'1.086" N	87°57'42.2496" E	02
29	Right Bank of Short Cut Diversion Channel, near Sehagori Bridge	Short Cut Diversion Channel	Amta II	Howrah	22°35'4.9776" N	87°57'55.2816" E	02
30	Left Bank of Short Cut Diversion Channel, near Sehagori Bridge	Short Cut Diversion Channel	Amta II	Howrah	22°35'10.176" N	87°58'6.7692" E	02
31	Left Bank of Short Cut Diversion Channel, near Saoria	Short Cut Diversion Channel	Amta II	Howrah	22°34'4.5516" N	87°55'59.2496" E	02
32	Lower Moja Damodar Ch. 2.03 KM.	Lower Moja Damodar	Amta II	Howrah	22°37'26.61" N	87°55'49.92" E	03

The works shall be carried out as per the specification stated hereunder.

Specification for Geotechnical Investigation Works

8.1 Field Investigation

Total of **64 numbers** boreholes shall be carried out at the proposed locations of the structures. The overall depth of the boreholes shall vary from **20m-40m** depending on the type of soil encountered or as directed by the Engineer-in-charge in the event of any unforeseen obstruction.

8.1.1 Boring/Drilling

Boreholes shall be carried out **as per the provision of the latest IS Codes** to obtain details about the soil profile, its nature, and strength and to collect soil samples for identification of the strata and conducting laboratory tests. Standard penetration tests are also to be conducted in the borehole at specified intervals. The minimum diameter of the borehole in soil shall be 150mm. If found necessary casing pipe shall be used and it shall be not more than 150mm above the bottom of the borehole. In the case of cohesionless soil, the casing pipe should not disturb the soil to be tested or sampled. Advancement of casing pipe shall be only through turning slowly and not by driving.

Standard penetration tests shall be conducted in all types of soils met within a borehole, to serve the variation in the soil stratification by comparing the N-values. This test shall be conducted at an interval of 1.5m at every change of strata encountered. A sufficient number of disturbed soil samples shall be collected from the split-spoon sampler for identification and laboratory tests.

The Consultant shall also provide a suitable barricade to carry out the work to prevent unwanted on busy city roads and maintain the safety of the site, Covid Protocol till to be maintained.

Sufficient lighting arrangements shall also be made for boring works to be conducted during evening hours.

A detailed log of the borehole shall be prepared for all the boreholes as per the relevant standard specifications. The information to be recorded in all the logs shall include, but is not limited to the following:

- Borehole number;
- Date and time of start and completion;
- Existing ground level;
- Type and diameter of boring at different depths including details of casing used if any;
- Descriptions, identification, and depth of different strata encountered;
- Depth at which SPT was conducted and the N-value;
- Number and type of samples collected at different depths;
- Groundwater level;
- Level of termination of Borehole;
- Weather information.

The rate for boring shall include setting out and marking boreholes, **taking existing ground levels (GTS) at boreholes from the nearby existing benchmark**, setting up boring and SPT equipment, collecting disturbed and undisturbed samples, and dispatching them to the testing laboratory including the arrangement of sampling containers and another incidental cost to complete the work.

8.1.2 Sampling

Disturbed samples- These shall be collected from the boreholes at every **3.0m** intervals to provide a completed description of the soil profile and its variations. Samples shall be immediately stored in air-tight jars by filling the jar as far as possible and should be kept under controlled weather conditions. These jars shall have self-sealing and they shall be labeled with the following information:**01 no of 1 m long measuring cylinder containing representative soil samples as per stratum encountered for each site, with labels for each soil strata with brief points of the soil strata parameters should be handed over to Engineer in Charge.**

- Origin of sample;
- Sample number;
- Depth of sampling;
- Length of recovery;
- Date of sampling.

Undisturbed samples- Undisturbed sampling comprises:

Collection of undisturbed samples from the boreholes using 450mm long minimum 75 mm diameter UDS tube wherever cohesive soil is encountered or at 1.5m interval or as directed by Engineer-in-Charge. Generally, an open drive sampler shall be permitted. The sampler shall be made of seamless steel of 100mm diameters as per the specification provided in IS:2132. The cutting edge of the cutting shoe shall be at an angle not exceeding 20 Deg. and inside clearance ratio shall generally be limited to 0.5 to 1.5 percent. Samplers with low clearance ratios shall be used in soft strata and those with high clearance ratios shall be used in stiff strata.

The sample tube and cutting shoe (or edge) shall be free from rust, pitting, burring, or any other defect. The use of oil inside the sampler shall be limited to the minimum practicable. One end of the sample tube shall be marked 'Top' and this end shall be kept uppermost during sampling.

The adaptor head is to be used with a sample tube exit of air or water during driving or jacking.

The penetration of the sample shall be rapid and continuous. The samples shall never be over-driven. The undisturbed samples shall be collected, transported, and preserved such that the sample is as nearly as possible in its original state.

They shall be properly sealed, waxed, and labeled suitably prior to their transportation to the laboratory. **All sampling needs to be undertaken in the presence of Project Management Consultant/client representatives.**

8.1.3 Groundwater

Groundwater level observations shall be made in the borehole and the water table level shall be determined as per relevant standards.

8.1.4 Transportation of soil samples

Transportation of soil samples will require to be made to the laboratory within the minimum possible time and a maximum of up to 5 (five) days from the date of collection at their own cost.

8.2 Submission of Field Bore Logs

Field borehole logs duly signed by Supervisor of Contractor and Project Management Consultant (PMC) Representative and with a note on the visual examination of soil strata shall be prepared i.e. nature, colour, consistency, and visual classification of the soil, thickness of soil strata, the thickness of expansive soil, and groundwater table if any, etc. and sample photographs are required to be submitted.

8.3 The bidder must have their own NABL accredited Laboratory or make such arrangements with NABL Accredited Laboratories. The Bidder must declare the names and addresses of the testing laboratories, with NABL Accreditation, with whom they want to make arrangements for executing the tests.

8.4 Laboratory Test requirements

- Grain size analysis (IS: 2720 Part IV-1975), double hydrometer method (with and without dispersion agent)
- Natural moisture content (IS: 2720 Part II-1973)
- Determination of Specific Gravity as per IS 2720 (Part – III)
- Liquid limit and Plastic limit (IS: 2720 Part V-1970)
- Determination of Unconfined Compression Strength as per IS 2720 (Part – X) for undisturbed sample
- Determination of Consolidation Properties as per IS 2720 (Part – XIV)
- Tri-axial Test for determination of Shear Strength Parameters of a specimen tested in Unconsolidated Undrained Tri-axial compression without measurement of pore water pressure as per IS 2720 (Part – XI)
- Determination of Free Swell Index of Soil as per IS 2720 (Part– VIII)
- C_s , C_v , and P_c (pre-consolidation pressure) from consolidation test (IS: 2720 Part XV-1965)
- Direct Shear Test in case of granular soil,
- etc.

Arrangements should be made for PMC & Client representative to witness the testing of samples in the laboratory.

8.5 General Requirement

All laboratory tests shall be done in accordance with relevant parts of IS: 2720, IS:2386, or others as applicable. The laboratory tests to be done on the soil samples are grain size analysis (sieve and hydrometer), gradation, liquid limit, plastic limit, specific gravity, natural dry density, natural moisture content, shear test (tri-axial test, direct shear test/unconfined compressive strength test), consolidation test, etc., Technical reports incorporating all the field data, laboratory test results with analysis and interpretation of test including the recommendation of foundation details shall be presented. *Six (6) hard copies and three (3) soft copies of the final report shall be submitted after the approval of the draft report.*

8.6 Submission of Reports

A preliminary report should be submitted immediately after completion of field works which shall include:

- Borehole Details
- Minimum one Colour Photograph (15 cm x 20 cm) for each Borehole location showing the activity being undertaken, shall be taken and submitted. The complete set of coloured photograph prints with their title/ BH No/ activity undertaken shall be submitted in an Album.

Upon completion of all the field and laboratory work, the Consultant shall submit a draft report containing Geological information of the region, the procedure adopted for investigation, field observations, summarized test data, conclusion, and recommendations. The report shall include detailed bore logs, subsoil sections, field test results, laboratory observations, and test results both in tabular as well as graphical form, practical and theoretical considerations/documents for the interpretation of test results, the supporting calculations for the conclusions drawn, etc. as per IS Codes. Initially, the Consultant shall submit three copies of the report in draft form for review.

The Consultant's qualified Geotechnical engineer shall visit the office/site for a detailed discussion on the comments on his draft report. During the discussions, it shall be decided as to the modifications that need to be done in the draft report.

Thereafter, the Consultant shall incorporate in his report the agreed modifications and after getting the amended draft report approved, three copies of the detailed final report and one soft copy shall be submitted along with graphs, tables, charts, etc.

The detailed final report based on field observations, and in-situ and laboratory tests shall encompass theoretical as well as practical considerations for the foundations of structures envisaged in the area under investigation. The consultant shall acquaint himself with the type of structures, foundation loads, and other information required from the Engineer.

8.7 Data to be furnished

The report shall also include but not be limited to the following:

- a) A plot showing the locations and reduced level of all field test e.g., boreholes, properly drawn to scale and dimensioned with reference to the established gridlines.

- b) Geological information of the areas such as geomorphology, geological structure, lithology, stratigraphy and tectonic faults, and seismicity of the region and site.
- c) Shear parameters and density shall be worked out for all soil layers/3 m intervals. Field samples shall be collected and preserved accordingly.
- d) A true cross-section of each site with reduced levels showing the classification and thickness of individual stratum, the position of groundwater table, various in-situ tests conducted, and samples collected at different depths and the rock stratum if met with.
- e) Results of all laboratory test summaries shall be presented as per the direction of the Engineer-in-Charge. All the relevant charts, tables, graphs, figures, supporting calculations, conclusions, and photographs of representative rock cores shall be furnished. **Excel files for the calculations shall be submitted.**
- f) **For all tri-axial shear tests stress vs. strain diagrams, as well as Mohr's circle envelopes, shall be furnished.** If backpressure is applied for saturation, the magnitude of the same shall be indicated. The value of modulus of elasticity 'E' shall be furnished for all tests along with relevant calculations.
- g) For all consolidation tests, the following curves shall be furnished: e vs $\log P$ with field curve and Compression vs $\log t$ or Compression vs square root of t (depending upon the shape of the plot for proper determination of coefficient of consolidation). The point showing the initial condition (e_0 , P_0) of the soil shall be marked on the curves.
- h) Values of compression index, and coefficient of volume compressibility shall be furnished. The procedure adopted for calculating the compression index from the field curve and settlement of soil strata shall be clearly specified. The time required for 50% and 90% primary consolidation along with the secondary settlement, if significant, shall also be calculated.

8.8 Analysis and Discussion of Results

The following data shall be furnished in the report:

- a) Analysis of results, comparison of field and laboratory data, discussion of results, a statistical average of soil parameters, viz. Engineering and Physical, for each identified layer.
- b) For shallow foundations the following information shall be provided:
 - i. Net safe allowable bearing pressure for isolated square footing and continuous strip footings of different sizes at different founding depths below ground level considering both shear failure and settlement criteria.
 - ii. Net Safe allowable bearing pressure for raft foundations at different depths below ground level considering both shear failure and settlement criteria.
- c) For pile foundations following necessary information shall be provided:
 - i. Type of pile

- ii. Suitable founding strata for the pile
 - iii. Estimated horizontal and vertical load-carrying capacity for piles of 1000mm, 1200mm, and 1500mm diameter shall be worked out at 3-4 depths. End bearing and frictional resistance of the pile shall be worked out separately as per IS 2911.
 - iv. Magnitude of negative skin friction, if any, pile spacing, to be considered.
- d) If expansive soil is met with removal/retain of the same under the structures/roads etc. shall be given. In the latter case, detailed specifications of any special treatment required including specifications from trials to be used, construction method, equipment to be deployed, etc. shall be furnished.
- e) Susceptibility of subsoil strata to liquefaction in the event of an earthquake.

9.0 Condition of Services:

9.1 Duration of Services:

The duration of services will be for 03 (Three) months which may change as per requirement. All documents prepared, generated, or collected during the period of the contract, in carrying out the services under this assignment will be the property of IWD. No information gathered or generated during and in carrying out this assignment shall be disclosed by the Consultant without the explicit permission of the Project Authority.

9.2 Visit to the workplace:

Consultants are encouraged to inspect and examine the workplaces and their surroundings and satisfy/apprise themselves as to the nature of the work, the means of access and in general, shall obtain themselves all necessary information as to risks, contingencies, and other circumstances which may influence or affect their tender and rates, before submitting their tenders. A consultant shall be deemed to have full knowledge of the workplace whether he/ she inspects the site or not and no extra payment/compensation consequent upon any misunderstanding / miss-happening or otherwise shall be allowed.

The consultant shall be responsible for arranging and maintaining all materials, tools & plants, access, facilities for his/her personnel, and all other services required for executing the work at his/her own cost unless it is specifically mentioned in the contract documents.

10.0 Payments:

The Consultant shall submit all field data & test data conducted at sites & laboratories. The payment will be made on the basis of duly accepted reports. Payment mode will be via ECS/NEFT through Govt. e-procurement system to the declared Bank Account Number of the Consultant.

Table – 2: Schedule of Delivery of the Reports

Sl. No.	Activities	Schedule of Delivery
1.	Preliminary Reports after completion of all field works	Within 60 calendars days of signing the agreement
2.	Draft Final Report	Within 75 calendars days of signing the agreement
3.	Final Report	Within 90 calendars days of signing the agreement

Table – 3: Payment Schedule

Sl. No.	Activities	Percentage of Payment
1.	Mobilization Advance (on submission of an equivalent amount of unconditional Bank Guarantee)	10% of the total Contract price
2.	Upon completion of field works	10% of the total Contract price
3.	Upon submission of the draft final report	30% of the total Contract price
4.	Upon submission of the final report	50% of the total Contract price

11.0 Qualification Criteria:

Qualification Criteria that the Firms should fulfil include:

- a) Should be a government registered firm/agency having worked on ADB/World Bank/JICA funded projects/Any Govt. Work for similar work.
 - b) The firm should have satisfactorily executed similar works, in the last three years since the date of submission of the bidding document. Similar work shall mean the drilling Works for a Multipurpose/Irrigation/Canal Project for a Government Department/ PSU as Principal contractor.
- 1) For Lot. 1 : Rs. 1304784.00 (Thirteen lakhs four thousand seven hundred and eighty four only) in the last three years;
 - 2) For Lot 2 : Rs. 1491181.00 (Fourteen lakhs ninety one thousand one hundred and eighty one only) in the last three years;
 - 3) For Lot. 3 : Rs. 1491181.00 (Fourteen lakhs ninety one thousand one hundred and eighty one only) in the last three years;
 - 4) For Lot. 4 : Rs. 1677579.00 (Sixteen lakhs seventy seven thousand five hundred and seventy nine only) in the last three years.

c) Copy of Work Orders, Schedule, and corresponding Completion Certificates of Works issued by the Tender Accepting / Executing Authority shall be appended.

- i. The average annual turnover of the firm during the last three financial years (2019-20, 2020-21 & 2021-22), ending 31st March of the previous financial year should be at least i) **Rs 16.31Lakh** for Lot-I, ii) **Rs 18.64 Lakh** for Lot-II, iii) **Rs 18.64 Lakh** for Lot-III, iv) **Rs 21.00 Lakh** for Lot-IV,. In this context, **copies of Income Tax Return for the last three financial years (2019-20, 2020-21 & 2021-22) shall be appended.**
- ii. The bidder should not have incurred any loss (profit after tax should be positive) in more than two financial years during the last five consecutive financial years (2019-20, 2020-21& 2021-22), for which Balance sheet, duly audited and certified by the Chartered Accountant must be furnished.
- iii. Proof of ownership of laboratory and NABL accreditation validity.
- iv. At least a Geotechnical Engineer with a post-graduate degree on the payroll of the company/firm for the last three years.
- v. Copies of ESI, PF registration
- vi. Copies of TDS Certificates and Certificate of the CA, Income Tax Return for last three years, PAN,GSTINofthefirm, etc. shall be appended.
- vii. Should possess documentary evidence of owning advanced and latest drilling machines, equipment, and accessories, Total Station of two seconds accuracy, and other survey-related equipment requiredto completetheassignment.
- viii. Firm should have sufficient experienced professionals, Engineers with at least 1 Key long-termPersonnel with necessary qualifications and experience in the Drilling who will be deployed on thework. Thesalarycertificates,degree, andexperienceoftheassociatedPersonnelwhowillbedeployedforexecutionoftheworkmaybe appended.**

Rate quoted by the consultant should be inclusive of allG.S.T., Cess etc. and other Taxes of the State or Central Government.

BANK GUARANTEE FOR ADVANCE PAYMENT

To: _____ *[name of Employer]*
_____ *[address of Employer]*
_____ *[name of Contract]*

Gentlemen:

In accordance with the provisions of the Conditions of Contract, sub-clause 3.1 of the above-mentioned Contract, _____ *[name and address of Contractor]* (hereinafter called "the Contractor") shall deposit with _____ *[name of Employer]* a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ *[amount of guarantee]*¹ _____ *[in words]*.

We, the _____ *[bank or financial institution]*, as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ *[name of Employer]* on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding _____ *[amount of guarantee]*³ _____ *[in words]*.

We further agree that no change or addition to or other modification of the terms of the Contract or of Works to be performed thereunder or of any of the Contract documents which may be made between _____ *[name of Employer]* and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ *[name of Employer]* receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and seal: _____
Name of Bank/Financial Institution: _____
Address: _____
Date: _____

³ An amount shall be inserted by the bank or financial institution representing the amount of the Advance Payment, and denominated in Indian Rupees.

PERFORMANCE BANK GUARANTEE
(To be given from a nationalized or scheduled bank in India)

To: _____ [name of Employer]
_____ [address of Employer]

WHEREAS _____ [name and address of Contractor]
(hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____
dated _____ to execute _____ [name of Contract and
brief description of Works] (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ [amount of guarantee]¹ _____ [in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of guarantee]¹ as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until 28 days from the date of expiry of the Defects Liability Period.

Signature and seal of the guarantor _____
Name of Bank _____
Address _____
Date _____

Form of Bid Security - Bank Guarantee

[Guarantor letterhead or SWIFT identifier code]

Bank Guarantee No.....[insert guarantee reference number]

Date.....[insert date of issue of the guarantee]

WHEREAS, _____ [name of Bidder]⁴ (hereinafter called "the Applicant") has submitted his Bid dated _____ [date] or will submit his Bid for the construction of _____ [name of Contract] (hereinafter called "the Bid") under Request for Bids No.....[insert number] (hereinafter called "the RFB")

KNOW ALL PEOPLE by these presents that We _____ [name of bank] of

_____ [name of country] having our registered office at _____ (hereinafter called "the Bank") are bound unto _____ [name of Employer] (hereinafter called "the Employer") in the sum of _____⁵ for which payment well and truly to be made to the said Employer the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____ 20____.

THE CONDITIONS of this obligation are:

1. If after Bid opening the Applicant (a) withdraws his bid during the period of Bid validity specified in the Letter of Bid, ("the Bid Validity Period"); or (b) does not accept the correction of the Bid Price pursuant to ITB 36;

Or

2. If the Applicant having been notified of the acceptance of his bid by the Employer during the period of Bid validity:
 - a fails or refuses to execute the Contract Agreement in accordance with the Instructions to Bidders, if required; or
 - b fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders.

⁴Insert name of the Bidder, which in the case of a joint venture shall be (a) the name of the joint venture that submits the bid if the JV has been constituted into a legally enforceable JV, or (b) the names of all future members of the JV as named in the letter of intent to execute the JV Agreement submitted by the bidder along with its bid.

⁵The Applicant should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 19.1 of the Instructions to Bidders.

we undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or any of the four conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date _____²⁶ days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE _____

SIGNATURE OF THE BANK _____

WITNESS _____

SEAL _____

[Signature, Name, and address]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

²⁶ 45 days after the end of the validity period of the Bid