NATIONAL ENGINEERING SERVICES PAKISTAN (PVT) LIMITED
NESPAK HOUSE: 1-C, Block-N, Model Town Extension, Lahore - 54700, Pakistan
Established in 1973

Ref: 4344/02A/IUH/01/1211

Date: January 27, 2022

ESTABLISHMENT OF BUSINESS PARK AT KORANGI FISH HARBOUR, KARACHI

Invitation of Bids for Geotechnical Investigations (Field and Laboratory Works)

Dear Sir,

Sealed bid (**Technical and Financial in separate sealed envelopes**) is invited in accordance with the attached **BOQ** and **qualification criteria** from drilling Contractors/Companies for carrying out the geotechnical investigations for the subject project.

The companies capable of carrying out subject work are requested to provide their Company's Profile and the following documents along with their sealed bids:

1. PEC Registration Certificate
2. FBR & PRA Registration Certificates
3. List of Similar Projects completed during last three years
4. Financial Capability
5. Equipment Capability
6. Personnel Capability
7. Litigation History
8. HSE Policies

The work comprises; execution of drilling of boreholes in tidal zone up to maximum depth of 20 m below existing ground level (EGL) in overburden soils by Straight Rotary/heavy percussion boring equipment, core drilling, performance of SPTs in boreholes, collection of disturbed/undisturbed soil samples, collection of borrow area samples, collection of water samples and laboratory testing of selected soil/rock/water samples. The field and laboratory work shall have to be completed according to the following time schedule:

Sr No.	Minimum No. of Straight Rotary Rig / Heavy Percussion Boring Equipment along with Pontoon / Barge or working platform compatible with the requirements of intertidal zone drilling works Required	Time for Completion of Field Investigations	Time for Completion of Laboratory Testing	Total Time for Completion of Field & Laboratory Investigations
1	1	30 days	15 days	45 days

Your bid shall be valid for a time period of ninety (90) days after the bid opening. **The work shall be executed under the instructions and full-time supervision of NESPAK engineers/geologists and the successful bidder shall mobilize to the site on three days' notice after issuance of Letter of Award/Acceptance**

The coordinates and ground elevations of all the investigation points by total station shall have to be provided to NESPAK before completion of investigation at site by the Contractor. The approved laboratory, where testing is to be carried out, shall be pursued by the successful bidder for timely completion of the assigned laboratory testing.

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Website: www.nespak.com.pk

AM/QUR/MTJ

TÜV AUSTRIA

The successful bidder shall be responsible for providing the field borehole logs, summary of laboratory test results and detailed laboratory test results to NESPAK, within the contract period. **A premium of up to 25 % will be admissible on the official rates of the soil laboratory, selected for testing of samples. This premium has been allowed as compensation to the Contractor for making advance payment to the laboratory and later following-up for obtaining test results in time. The name of the laboratory should be provided on page 2 of 2 (Annexure-1).**

The bidders shall submit a bid security amounting to 2% of bid price at the time of submission of bids in the form of pay order or bank draft in favor of M/s NESPAK.

Your **most competitive** sealed bids (**inclusive of all taxes**) in accordance with the BOQ and qualification criteria, should reach the office of the undersigned by 1100 hours on or before February 11, 2022. Technical bids would be opened on the same day at 1200 hours after their receipt in the presence of those bidders who wish to be present.

Financial bids would be opened after evaluation of Technical bids, at a time, date and venue announced and communicated to the technically responsive bidders in advance. However, the final decision to accept/reject any or all the bids as per PPRA rules solely lies with the undersigned. The entire work shall be carried out in accordance with the requirements of the General Bidding Documents for Geotechnical Investigations available at NESPAK website (www.nespak.com.pk). **Payment of the entire work shall be made by NESPAK after receipt of its fee from Client.**

for National Engineering Services Pakistan (Pvt.) Limited

(IRFAN UL HAQ)
Vice President/Head
Geotechnical & Geoenvironmental Engineering Division

AM/OUR/MTJ

ESTABLISHMENT OF BUSINESS PARK AT KORANGI FISH HARBOUR, KARACHI

GEOTECHNICAL INVESTIGATIONS
BILL OF QUANTITIES

Sr. No.	Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
A.	**FIELD INVESTIGATIONS**				
A1	Mobilization and demobilization of at least one (1) straight rotary/heavy percussion drilling rigs alongwith allied accessories and Pontoon / Barge or working platform compatible with the requirements of intertidal zone drilling works (drilling has to be carried out in the area which lies within the tidal range and hence remains submerged under water up to 2.0 to 2.5 m depth during high tide), at site including shifting from one investigation point to another. The equipment shall be capable to obtain core recovery more than 80 percent and to complete the investigations within the time schedule.	L.S.	Job		
A2	Execution of four (4) boreholes up to a maximum depth of 15 m and two (2) boreholes up to a maximum depth of 20 m in overburden soils or up to the bedrock, whichever is met earlier, below existing ground level by straight rotary/percussion drilling method including backfilling of boreholes to their original position using cement-sand -bentonite mix.	L.M.	70		
A3	Continuous core drilling (NX or HQ size as directed by the Engineer) in bedrock up to a maximum depth of 10 m below rock strike level by using double tube core barrel, including extraction, preservation of core samples in core boxes, waxing, packing, photography of rock cores and transportation of core samples to the laboratory.	L.M.	30		
A4	Performance of Standard Penetration Tests (SPTs) in boreholes along with collection of SPT samples at 1 m interval in general, or as necessary, including their labelling, packing, storage & transportation to an approved testing laboratory.	No.	62		
A5	Collection of undistrubed soil samples from boreholes through Shelby/Denison/Pitcher samplers, including their waxing, labelling, packing, storage & transportation to an approved testing laboratory.	No.	8		
A6	Collection of borrow area samples (minimum weight 50-100 kg.) for earth work including their labelling, packing, storage & transportation to an approved laboratory.	No.	3		
A7	Collection of water samples (if encountered) from boreholes including their labelling, packing, storage & transportation to an approved testing laboratory.	No.	3		
	Sub-Total A	**Rs.**			

Establishment of coordinates and ground/sea bed level at the location of boreholes using total station are included in the scope of work.
The coordinates should be provided with reference to a permanent local bench mark.
All soil and rock samples must be labelled, stored and transported as per ASTM. The area ratio and clearance ratio of the thin walled tube, should be in strict compliance with relevant ASTM standard.
The preferred method of drilling is straight rotary. Percussion boring will be allowed only in case of presence of excessive gravels/cobbles/boulders in the substrata.

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT) LIMITED

ESTABLISHMENT OF BUSINESS PARK AT KORANGI FISH HARBOUR, KARACHI

GEOTECHNICAL INVESTIGATIONS

BILL OF QUANTITIES

Sr. No.	Description	Unit	Qty.	Rate	Amount
B.	LABORATORY TESTING			(Rs.)	(Rs.)
B1	Sieve analysis	No.	25		
B2	Hydrometer analysis	No.	8		
B3	Liquid and plastic limits	No.	12		
B4	Bulk density & dry density	No.	10		
B5	Direct Shear (Soil Samples)	No.	5		
B6	Consolidation with Swell Pressure Measurements	No.	5		
B7	Unconfined Compressive Strength with Stress Strain Curve (Soil Samples)	No.	5		
B8	Uniaxial Compressive Strength including Sample Preparation from Core (Rock Samples)	No.	8		
B9	Point load test (Rock Samples)	No.	4		
B10	Modulus of Elasticity (Rock Samples)	No.	3		
B11	Sulphate content of soil	No.	5		
B12	Chloride content of soil	No.	5		
B13	Organic matter content of soil	No.	5		
B14	Complete chemical analysis of water samples i/c TDS, Cl, SO4 & pH	No.	2		
	Sub- Total B	**Rs.**			

Name of Laboratory:

Total (A+B)= **Rs.**

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT) LIMITED

ESTABLISHMENT OF BUSINESS PARK AT KORANGI FISH HARBOUR, KARACHI

1. Qualification Criteria

Qualification will be based on the criteria given in the following paras regarding the Applicant's experience, personnel and equipment capabilities, financial position and litigation history, as demonstrated by the Applicant's responses in the Forms attached as Annex-A to this Document. The Employer reserves the right to waive minor deviations, if these do not materially affect the capability of an Applicant to perform the contract by the Applicant.

Experience and resources of the Company intended to be employed as sub-contractor shall not be taken into account in determining the Applicant's compliance with the qualifying criteria. However, for joint venture, collective experience, resources and financial soundness of all partners shall be considered.

1.1 General Information

The Applicant shall provide general information of his firm as per the format specified in the Application Form A-1 attached in Annex-A.

1.2 Experience of the Firm

The Applicant shall meet the following minimum criteria:

1) Successful experience as contractor in the execution of at least five (5) projects involving bulk of geotechnical investigations within the last three (03) years. This experience should specifically be of geotechnical investigations of similar nature. The Applicant will supply information as per the format specified in the Application Form A-2 attached in Annex-A.

1.3 Personnel Capabilities

The Applicant must have in his employment, suitably qualified and experience personnel to fulfill the positions tabulated below. The Applicant will supply information as per the format specified in the Application Form A-3 attached in Annex-A.

Sr. No.	Position	Qualification*	No.	Minimum Experience (Years)
1	Technical Manager	B.Sc. Civil Engg.	1	5
2	Site Geologist/ Supervisor / Engineer	M. Sc. Geology/ B.Sc. Civil Engg. / B.Sc. Geological Engg.	1	2
3	HSE Supervisor	HSE Certification course	1	1
4	Driller	Literate	1	3
5	Skilled Labor	-	As Required	-

1.4 Equipment Capabilities

The Applicant should own, or have assured access to the following key items of equipment in full working order, and must demonstrate that, based on known commitments, these will be available for deployment on the proposed works.

Sr. No.	Equipment Type & Characteristics	Minimum Number Required
1	Straight Rotary Drilling rig complete in all respects including drilling rods, bits, mud pumps etc. along with at least one stand-by rig. The equipment shall be capable to obtain core recovery more than 80 percent and to complete the investigations within the time schedule.	1
2	Pontoon/ Barge or working platform compatible with the requirements of intertidal zone drilling works (drilling has to be carried out in the area which lies within the tidal range and hence remains submerged under water up to 2.0 to 2.5 m depth during high tide).	1
3	Percussion Boring Set (>250 mm diameter), complete in all respects including tripod, chisel / bit etc.	1
4	Casing set having various diameters for all types of boring at least 20 m in length with casing bits.	1
5	Standard penetration test equipment complete in all respects including all rods, split spoon sampler, hammer and containers etc.	1
6	Shelby/Denison/Pitcher samplers	1
7	UDS tubes & Split Spoon Samplers	As Required
8	Hydraulic jacks with all accessories for the extraction of casings	1
9	Electrically operated sounder for groundwater level measurement	1
10	Wooden box for the preservation of undisturbed soil / rock samples	As required
11	Transport for mobilization of equipment	As required

The Applicant will supply information as per the format specified in the Application Form A-4 attached in Annex-A.

1.5 Financial Capabilities

The Applicant shall meet the following minimum criteria:

1) Average annual turnover which is also termed as income from contracting for procurement of geotechnical investigations and is defined as billing for works completed during the last three (3) years of at least Rs. 3 million or the said figure has been achieved in any year during the last three (3) years.

The Applicant shall also provide evidence of financial health such as bank account statements, available line of credits, etc., to show the soundness of the Applicant's financial position for procurement of geotechnical investigations works. The Applicant will provide annual turnover of the geotechnical investigation works carried out by him during the last three years. The Applicant will supply annual turnover information as per the format specified in the Application Form A-5 attached in Annex-A.

1.6 Litigation History

The Applicant should provide accurate information on any litigation or arbitration resulting from Contracts completed or under execution over the last three (03) years. The Applicant will supply information as per the format specified in the Application Form A-6 attached in Annex-A. A consistent/ overwhelming history of litigation against the Applicant may result in rejection of the application. In case an Applicant claims Nil litigation, he shall submit the same statement on the letter head of his company.

1.7 Application of Health, Safety and Environmental Standards

The Applicant should provide the HSE Policies and supporting documentary evidence for the following:

i) First Aid Box
ii) Personnel Protective Equipments (PPEs)
iii) Standard Operating Procedures (SOPs)
iv) Health, Safety and Environmental (HSE) Policies
v) HSE staff

The Applicant will supply information as per the format specified in the Application Form A-7 attached in Annex-A.

Application Form A-1

General Information

All individual Applicants applying for qualification are requested to complete the information in this form. Nationality information (if applicable) is also to be provided for foreign owners as required under the PEC Bye-Laws as a Partnership.

1.	Name of Firm	
2.	Head Office Address	
3.	Telephone	Contact Person: Name: Title: Cell No.
4.	Fax	E-mail
5.	Place of Incorporation/Registration Certificates of the firm*	Year of incorporation/registration

*** Registration certificates must include:**

- Valid registration with Pakistan Engineering Council (PEC)
- Valid registration with Federal Board of Revenue (FBR)
- Valid registration with concerned Provincial Revenue Authority (PRA)
- Proof of active taxpayer of FBR & PRA

Application Form A-2

Page___ of ____Pages

Experience of the Firm

Name of Applicant: _____

Sr. No.	Name of Project	Value of Geotech Contract* (Pak Rs.)	Contract Duration

Attach copy of Letter of Awards / Project Completion Certificates for any five (5) latest projects involving bulk of geotechnical investigations within the last three (03) years.

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Application Form A-3

Page___ of ____Pages

Personnel Capabilities

Name of Applicant: _____

Sr. No.	Name of Person	Qualification	Designation/ Position*	Total Experience

Attach CVs of the Key Staff Members.

Application Form A-4

Page___ of ____Pages

Equipment Capabilities

Name of Applicant: _____

Sr. No.	Equipment Description	Capacity	Number of Equipment	Working Condition a) Very good b) Good c) Satisfactory	Current Location

Application Form A-5 **Page___ of ____Pages**

Financial Capabilities

Name of Applicant: _____

Year	Annual Turnover (in PKR)
2020 – 2021	
2019 – 2020	
2018 – 2019	

Note: Financial soundness certificate from the bank(s) as specified in section 1.5 must be provided by the Applicant

Application Form A-6

Litigation History

Name of Applicant: _____

Year	Award for or against Applicant	Name of Client, cause of litigation, and matter in dispute	Disputed amount (current value Pak Rs. or equivalent)

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Application Form A-7 **Page___ of ____Pages**

Health, Safety and Environmental (HSE) Policies Personal Protective Equipment (PPE) and Standard Operating Procedures (SOP) of the Contractor

Name of Applicant: _____

The Applicant should provide the following policies/supporting documentary evidence as required in Para 1.7.

A. HSE Policies

Please attach HSE Policies

B. Details of PPE Available with the Contractor

Sr. No.	Type of PPE	Total Number

C. Details of SOPs of the Contractor

Please attach the copies of SOPs