

**Balmer Lawrie & Co Ltd.**  
(A Government of India Enterprise)  
Engineering & Projects  
21, Netaji Subhas Road  
Kolkata-700 001

**TENDER FOR SOIL INVESTIGATION WORK**

**AT**

**KHASRA NO. 8//25, 15//5, VILLAGE NIKHRI**

**DHARUHERA, HARYANA**

**TENDER NO: E&P/LI/CCP/DHA/SOIL/01**

**DUE DATE : 10.01.2014**

**NOTICE INVITING TENDER**  
**Tender No: E&P/LI/CCP/DHA/SOIL/01**

M/s. Balmer Lawrie & Co Ltd invites sealed tenders, for carrying out **Soil investigation Work** at premises of M/s Transafe Services Ltd, village Nikhri, Dharuhera, Haryana. The site is located on the National Highway NH8 to Jaipur.

The tender documents comprising, Invitation to Tender, Conditions of Contract, Scope of Work etc as enclosed. Rates shall be inclusive of all taxes, duties, levies etc. as applicable.

The Scope of Work under this tender will cover as mentioned in Technical Specification and Schedule of work.

Time is the essence of the contract. The time schedule for completion of the whole work according to the contract shall be 30 days from the date of placement of order by M/s. Balmer Lawrie & Co Ltd.

Bidder shall require to submit detail of similar work executed during past seven(7) years. PAN, Service Tax registration, VAT/TIN shall require to be submitted alongwith bid.

Detailed offer to be submitted in a sealed cover, duly superscripted, Tender Number and Name of the Work complete in all respects as stipulated in the Conditions of Contract should reach the office of undersigned on or before **10.01.2014 up to 16.00 hrs.**

Tenders not conforming to the above mentioned requirements are liable to be rejected.

For any clarification / queries you may please contact Sri G C Saha, Associate Vice President (E&P),(mob no. 9748773900).

Please acknowledge receipt and confirm your participation in this tender.

Thanking you,

Yours faithfully,  
for **Balmer Lawrie & Co Ltd**

**A Mukhopadhyay**  
**Senior Vice President (Technical)**

**NOTE**

1. Bids of any tenderer may be rejected if a conflict of interest between the bidder and Company (Balmer Lawrie) is detected at any stage.
2. Our Company reserves the right to cancel the tender/offers without assigning any reason whatsoever.
3. The tender document along with bid Format may be downloaded from our website [www.balmerlawrie.com](http://www.balmerlawrie.com) or obtained from our office at the address given above during the normal office hours.
4. Tender if submitted through e-mail or fax shall be summarily rejected.

## **CONDITIONS OF CONTRACT**

### **1.0 SUBMISSION OF TENDER**

- 1.1 The sealed tender should be addressed and sent by Registered Post or personally handed over to the Tender Receiving Authority specified in invitation to Tender or put in the Tender Box designed for the specific work located at the address specified in the Notice Inviting Tender.
- 1.2 The Sealed Tender must reach the specified Address before the time specified in the Notice Inviting Tender.

### **2.0 RATES AND OTHER ENTRIES**

- (a) The tenderer should quote for all items in the Schedule of Rates. The rate should be expressed in English both in figures and words. Where discrepancy exists between the two, the rates expressed in words will prevail. Similarly if there is any discrepancy between unit rate and total amount, the unit rate will prevail.
- (b) The rates should be quoted in the same units as mentioned in the tender schedule of quantities.
- (c) All entries in the tender documents should be in ink / type. Corrections if any should be attested by full signature of the tenderer.
- (d) Every page of the tender document including annexure / enclosures shall be stamped and signed by the tenderer or his authorized representative thereby indicating that each and every page has been read and the points noted.

### **3.0 RIGHT TO ACCEPT OR REJECT TENDER**

M/s Balmer Lawrie & Co Ltd reserves the right to accept or reject any or every tender without assigning any reason whatsoever / or to negotiate with the tenderer (s) in the manner considers suitable. The work may be split up if considered expedient.

### **4.0 WATER AND POWER**

The contractor without any extra cost shall make necessary arrangement to draw water from the source available within the premises. Construction power as available at site would be made from the substation/distribution boards situated within the premises free of cost.

### **5.0 TERMS OF PAYMENT**

100% bill payment after statutory deductions for IT/ VAT or WCT etc. shall be made within 15 days from the date of certification of bill & receipt of report by the Owner.

### **6.0 TAXES & DUTIES**

Rates shall be inclusive of all taxes, duties, levies etc. as applicable.

**7.0 LABOUR LAWS**

- (i) No Labour below the age of eighteen (18) years shall be employed on Work.
- (ii) Contractor shall not pay less than what is provided under law to labourers engaged by him on Work.
- (iii) Contractor shall at his expense comply with all labour laws and keep Owner indemnified in respect thereof.
- (iv) In addition to above, rules and regulations as contained in Contract Labour (Regulation and Abolition) Act, 1970 will also be applicable for this contract. For the purpose of registration as per the above Act, Contractor may contact the owner for further details.
- (v) Contractor shall secure full safety of the workers / employees engaged by him in the Site premises and shall take at his own cost, insurances and such other safety regulations for the said purpose.

**8.0 IMPLEMENTATION OF APPRENTICES ACT 1964**

Implementation of apprentices Act 1964 shall be strictly adhered to.

## TECHNICAL SPECIFICATION FOR SOIL INVESTIGATION WORK

### Tender No: E&P/LI/CCP/DHA/SOIL/01

#### 1.0 PROJECT

**M/s Balmer Lawrie & Co. Ltd.** propose to carry out soil investigation work for construction of warehouse and allied facilities at Dharuhera. The indicative plot plan is as shown in the drawing enclosed. In order to design the warehouse/building foundations, pavement etc, a detailed soil investigation is needed, which shall be done under scope of this specification.

#### 2.0 SCOPE OF WORK FOR SOIL INVESTIGATION

The nature and extent of soil investigation as needed for the above project, has been briefly described below:

Standard Penetration Test to be carried out at locations as decided by the Engineer-in-charge with the soil investigation agency. Soil samples to be collected as per code of practice to determine soil parameters. Bore-logs showing various soil strata along with SPT values shall be furnished in the Soil Investigation Report. The bores shall be done to a average depth of 30 meters or the refusal strata whichever is less from the existing ground level. Soil samples shall be taken at an interval of 3.0 meters or change in strata, whichever occurs earlier. The consolidation properties of the base soil to be assessed with relevant tests and the data are to be included in the report. The CBR values are to be determined on laboratory samples. The bearing capacity recommendation should take care of the settlement criteria stipulated in the IS code. Dynamic cone penetration tests to correlate the data available from various bores shall be conducted.

The ground water level shall be determined and to be incorporated in the report. The elevation of ground water table shall be incorporated in the bore-logs mentioned above.

Laboratory tests shall be carried out in order to determine the following soil characteristics:

- a) Natural moisture content
- b) Liquid limit
- c) Plastic limit
- d) Bulk and dry density
- e) Specific gravity
- f) Particle size distribution
  - i) Sieve
  - ii) Hydrometer
- g) Tri-axial/direct shear test
- h) Consolidation test
- i) Sulphate and chloride content
  - i) On soil
  - ii) On water

CBR value shall be obtained at two locations at site to decide the pavement. Specific recommendation for pavement sub-grade/sub-base, boundary wall foundation etc. to be incorporated in the report.

All the above test results shall be furnished along with the Soil Investigation Report for each of the samples collected at site.

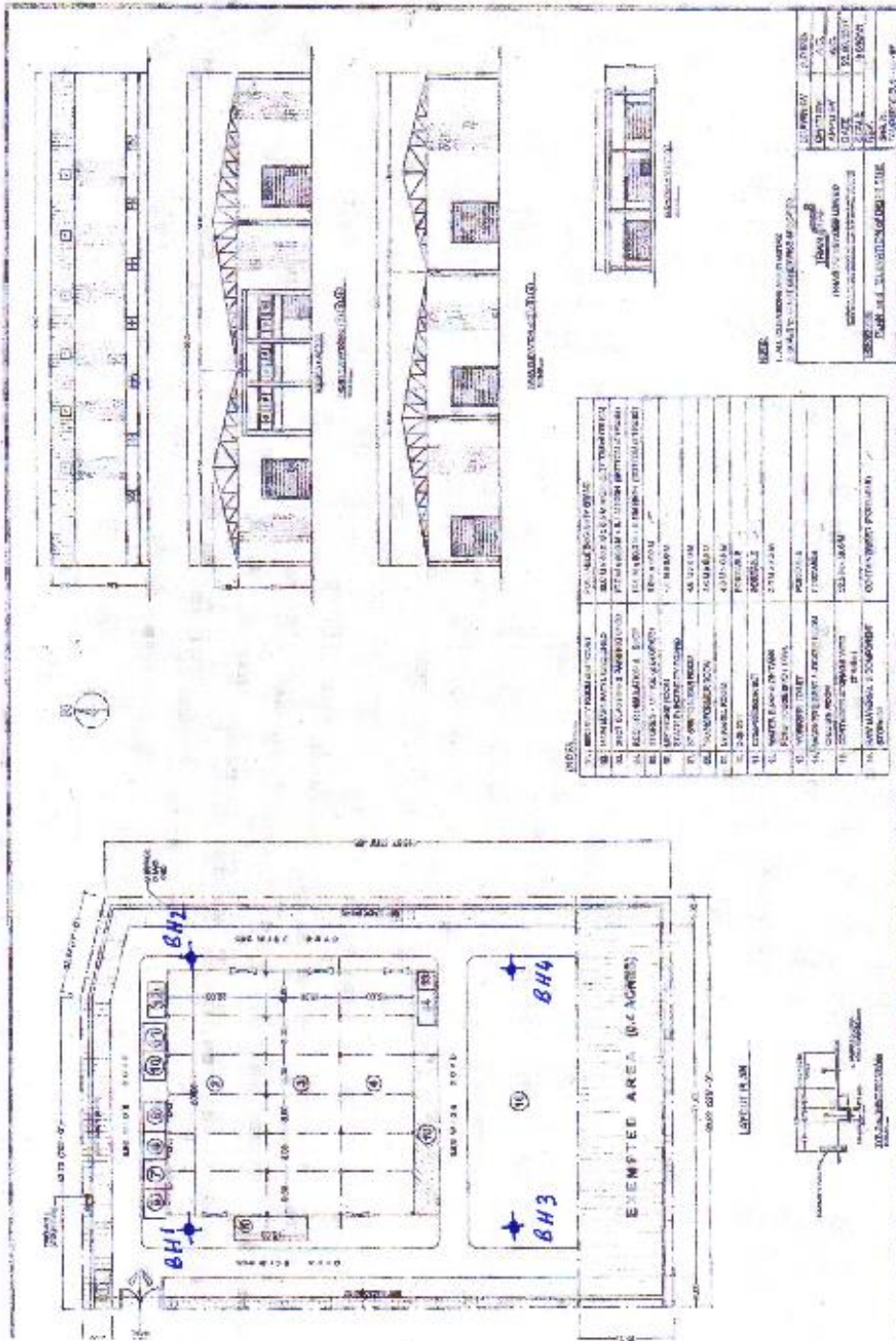
Filled-up soil/black cotton soil, if available within the proposed area, a proper assessment shall be made for such soil strata. The Soil Investigator shall measure the depth of such soil layer at different locations within the plot and type of such soil shall be investigated in a view to determine the suitability of the same in regards to develop the surface for

pavement work. A representation in the drawing shall be made showing depth of such strata across the pavement area by incorporating cross sectional profile so as to assess the extent of site development activity needed to optimize cutting/filling.

### **3.0 SUBMISSION OF SOIL INVESTIGATION REPORT**

A comprehensive Soil Investigation Report shall be prepared and submitted by the agency in duplicate. The report shall consist of at least the following information:

- A brief summary explaining the basic soil characteristics of the land area along with specific recommendation towards allowable net bearing capacity for pavement design. The bearing capacity recommendation should be made considering Shear Parameters of soil as well as the settlement criteria.
- Technical representation of all the bore-logs duly incorporating the bore no. and location of such bore at site showing all the soil strata encountered during execution of boring and Ground Water Table available at the particular location.
- All laboratory test results against each individual test samples taken at site to be furnished in the form of tables.
- Specific recommendation in relation to pavement sub-grade design to be furnished. In case filled up/black cotton soil layer exists, specific recommendation to construct the pavement/boundary wall on such soil to be indicated.
- All supporting calculations in order to derive the recommended allowable bearing capacity and settlement calculation to be furnished in proper manner.
- All SPT test results to be furnished in the bore-log duly incorporating the depth of such test to be taken up to full depth from ground level.
- CBR value based on laboratory value.



<b>SCHEDULE OF WORK</b>					
<b>Name of work : Conducting out Soil investigation Work at Dharuhera, Haryana</b>					
<b>S.No</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate in (Rs.)</b>	<b>Amount in (Rs.)</b>
<b>1</b>	Mobilization, at site with all necessary plant and machinery, providing site establishment etc. The item also includes providing enabling works like platforms and temporary approaches etc to carry out the work.	LS	1		
<b>2</b>	Clearing of bushes, shrubs, trees etc including uprooting to facilitate soil investigation work and clearing, carting away material outside our premises.	SqM	20		
<b>3</b>	Carryout 150 mm dia investigation bores up to a maximum depth of 30 M from existing ground level/ pavement level as per scope of work, preparing bore log data etc., arranging collection of undisturbed soil samples complete (Approximately 4 nos bore holes). Cost to include cutting of top concrete/ hard layer if any	RM	120		
<b>4</b>	Carry out standard penetration test at an interval of 2.0M and /or starting of every new soil strata. Collection of field data for preparation of investigation report and working out the bearing capacity.	Nos	60		
<b>5</b>	Collect disturbed soil samples every 3 meter or at change in strata for physical identification and preparation of boring log.	Nos	40		
<b>6</b>	Collect water samples in one gallon capacity polythene container and indicate water table in the report.	Nos	02		
<b>7</b>	Conduct laboratory test as required:				
<b>i</b>	Natural moisture content	Nos	40		
<b>ii</b>	Liquid limit	Nos	40		
<b>iii</b>	Plastic limit	Nos	40		
<b>iv</b>	Bulk and dry density	Nos	40		
<b>v</b>	Specific gravity	Nos	40		
<b>vi</b>	Particle size distribution				



	i) Sieve	Nos	40		
	ii) Hydrometer	Nos	40		
vii	Triaxial / direct shear test	Nos	4		
vii	Consolidation test	Nos	4		
ix	Chemical test analysis for pH sulphate and chloride content				
	i) On soil	Nos	4		
	ii) On water	Nos	4		
6	Determination of CBR value on laboratory samples.	Sets	4		
7	Dynamic cone penetration test.	Nos	2		
8	Preparation and submission of soil investigation report based on field data available from the tests. The report should be prepared in line with the scope of work enclosed. It should include specific recommendation regarding net soil bearing capacity based on the field data. The supporting calculations for deriving bearing capacity should be a part of the report. The report should include all other information as per requirement stipulated in scope of work.	LS	Complete		
	SUB TOTAL				
	Add Service Tax @				
	<b>TOTAL AMOUNT</b>				
	<b>(Rupees.....only)</b>				