TENDER DOCUMENT

(Ref No. DIMTS/Railways/ECR/2025-26/02)

for

Tender for Carrying Out Soil Investigation work in connection with Hazaribagh-Arigada doubling with "Y" connection with Ranchi Road, Shivpur-Kathautia Doubling and Koderma-Hazaribagh doubling with "Y" connection at Koderma-Hazaribagh Town.

Bid Submission: 16.07.2025 at 15:00 Hours

Bid Opening: 16.07.2025 a 15:30 Hours

Concerned Personnel

Mr. Arvind Kumar Shrivastava
Consultant – RAILWAYS/DIMTS

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1. **<u>VENDOR need to submit the following particulars-</u>**
   a) Company profile with all necessary certificates.
   b) List of ongoing and completed works including completion certificate in last 5 years. (in tabulated format)
   c) Turnover certificate of the firm / company for last 3 years.
   d) List of equipment's with proof of their ownership and lease document in case of equipment is on lease, lab location and NABL status.
   e) List of key personnel's and staff available with their updated CV.
2. **Tenderers are required to fill their quotation in form attached as Annexure – A.**
3. **Time period:**
   a) Completion period for the said work will be 40 days.
   b) Timeline Schedule:
      (i) Execution of work on site in 30 days.
      (ii) Report and data submission in desired format in 10days.
4. **Payment:**
   a) No mobilization will be given to awarded contractor.
   b) Payment will be done on back-to-back basis i.e. payment will be done after M/s DIMTS Ltd. receives respective payment from ECR.
   c) Any upward variation, item to item will be considered only after written approval of M/s DIMTS Ltd.
5. **Rates:**
   a) The rates agreed shall be all-inclusive for completion of works in accordance with terms and conditions and processes as per standard specifications, relevant codes whether mentioned or not in the Scope of Work.
   b) The rates agreed shall be firm and hold good till the completion of the works, and no additional claim or amount shall be admissible on account of fluctuations in market rates, increase in taxes, levies, fees royalties etc.
6. **Liquidated Damages:**

   In case there is any delay in completion of the field work or in submission of the draft reports or final report, liquidated damages @ 0.5% of value of entire work order as stipulated in the letter of award per week of delay shall be levied, subject to a maximum limit of 10% of value of entire work as stipulated in the letter of award.
7. **OTHER CONDITIONS:**
   a) Tenderer shall be responsible for obtaining all the necessary approvals from local authorities. However, letter (if any) required from M/s DIMTS ltd will be provided on tenderer request.
   b) Tenderer shall ensure that there shall be no violation of any statutory provisions on your part and that you are legally compliant with all the provisions of labour and other laws and shall further ensure that the labour and other licenses are renewed and kept valid throughout the currency of contract. M/s DIMTS shall not be responsible for any liability arising there from on any account whatsoever.
   c) Decision of DIMTS shall be final

d) In case of variation in quantity, revised rated received from the client as per GCC of Railway shall be applicable to contractor as follows-

i) Quantities operated in excess of 125% but up to 140% of the agreement quantity of the concerned item, shall be paid at 98% of the rate awarded for that item in that particular tender.

ii) Quantities operated in excess of 140% but up to 150% of the agreement quantity of the concerned item shall be paid at 96% of the rate awarded for that item in that particular tender.

iii) Variation in quantities of individual items beyond 150% will be avoided and would be permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.

iv) Variation to quantities of Minor Value Item:

A. The limit for varying quantities for minor value items shall be 100% (as against 25% prescribed for other items). A minor value item for this purpose is defined as an item whose original agreement value is less than 1 % of the total original contract value.

B. Quantities operated up to and including 100% of the agreement quantity of the concerned minor value item, shall be paid at the rate awarded for that item in that particular tender.

C. Quantities operated in excess of 100% but up to 200% of the agreement quantity of the concerned minor value item, shall be paid at 98% of the rate awarded for that item in that particular tender.

D. Variation in quantities of individual minor value item beyond 200% will be avoided and would be permitted only in exceptional unavoidable circumstances and shall be paid at 96% of the rate awarded for that item in that particular tender.

Scope of Geotechnical Work for Project:

Conducting Soil Investigation work at “Minor Bridge/ Major Bridge/Important Bridge/ ROBs/ RUBs locations, Trial pit sample collection with testing and Borrow area sample collection with testing” in connection with Hazaribagh-Arigada doubling with "Y" connection with Ranchi Road, Shivpur-Kathautia Doubling and Koderma-Hazaribagh doubling with "Y" connection at Koderma-Hazaribagh Town.

Annexure-1

Scope of Geotechnical Work for Project:

S.N.	Item Description	Unit	Qty.
A.	**Soil / Overburden Strata**		
1	Conduction of 150mm dia bore holes and carrying out SPT as per IS:2131, Tests shall be made at every change in stratum or at intervals of not more than 1.5m whichever is less. Tests may be made at lesser intervals if specified or considered necessary. The intervals be increased to 3m if in between no change in strata, collection of undisturbed samples & disturbed samples and carrying out following lab testing as per relevant parts of IS:2720.	RM	500 (indicative)
2	Drilling corresponding to NX size diameter holes through all kind of Rock Strata and collection of disturbed & undisturbed samples, also conducting the required laboratory testing of the collected rock samples as per IS code.		
3	**Tests on Soil Sample: -**	**Test Rates are included in Drilling R/M Rates (Min. one test is mandatory on every bore log including railways standards as stated above)**	
	Natural moisture content		
	Atterberg's limit (Liquid limit & Plastic limit)		
	Bulk and dry density		
	Specific gravity		
	Sieve analysis		
	Hydrometer analysis		
	Consolidation Test on Clay		

	Unconfined Compression Test	
	Direct shear test (In case of Sand)	
	Triaxial Shear Test (In case of Clay)	
Rock Strata		
	Visual Observation on Sample in the Field: -	**Test Rates are included in Drilling R/M Rates (Min. one test is mandatory on every bore log including railways standards as stated above)**
4	Core Recovery (CR)	
	Rock Quality Designation (RQD)	
	Tests on Rock Sample in Labs:	
	Bulk and dry density	
	Point load test	
	Specific gravity	
	Water absorption & Porosity	
	Hardness	
	Modulus of Elasticity	
	Abrasion Testing	
	Uniaxial compressive strength	
Reports		
5	Preparation and submission of Geotechnical Investigation Reports.	6 Nos. (Rates are included in Drilling R/M Rates)

Terms and Conditions:

a) The exploratory boring and sub-soil investigation may be required to be done during the course of execution of the work.
b) Contractor shall set out the work according to the plan and as directed by the Engineer or his representative. Reference pegs shall be made permanent and kept clear of all obstructions. He/ they shall obtain the approval in writing from the Engineer for the correctness of the setting out and the reference marks before commencing the actual execution of the work.
c) In sandy and non-cohesive strata, soil samples shall be collected from the bore holes at depth intervals of 5 M and at every change of strata whichever is less taking due care that the sample collected truly represents the strata and is not vitiated in any way by washing out of fines. Undisturbed soil samples shall be collected from the bore holes in cohesive soil strata at depth of 5 M and at every change of strata whichever is less. Standard penetration tests shall be carried out in all bore holes other than in rock and “N” values shall be recorded as directed by Engineer.
d) The location, depth and number of bore holes shown in the tender Schedule are tentative and are subject to modifications as actually required at site at the discretion of the Engineer and no claim whatsoever will be entertained for any extra rate due to modification of quantities shown in the tender Schedule or to sites of boreholes.
e) The exact locations, depths and sequence for boring shall be advised to the contractor by the Engineer beforehand or during the progress of the work.
f) At some of the locations, the boring/drilling work will have to be carried out in standing water or marshy land. In such cases, the contractor shall have to make his own arrangements of boats,

trestles, tripods, platforms, sand bags and all other arrangements which are required in order to successfully perform boring/drilling, sample collections, penetration tests and all other items of works.

g) Cost of all materials, tools, plants, equipments, sheds etc. required for the work and all charges on account of their transportation, handling, erecting, dismantling after work shall be included in the rates quoted by contractor and no extra payment will be made for these. The rates quoted shall include cost of all ancillary items of work, if any, to complete the work as described in the stipulated duration of time and no extra payment shall be admissible on this account.
h) The Engineer will have the right to inspect any or all the equipments of the contractor before starting the work or at any time during the progress of the work and the contractor shall remove from site and not use any such equipments as have been found unsuitable.
i) During the course of work the contractor shall afford all facilities, at his own expense, to the Engineer for inspecting the works, taking measurements and for all other activities as found necessary by the Engineer.
j) The contractor shall make accessible to the Engineer all the laboratory equipments, records, testing of samples etc. at all times during the progress of the work. The Client reserve the right to post full time or part time, one or more of their representatives in the laboratory of the contractor in order to ensure proper supervision of the work.

For BORING/DRILLING works-

a) Bore holes shall be of 150mm nominal diameter. In non-rocky strata the bore hole is to be extended by shell and auger or any other approved method but wash boring or purcussion boring shall not be adopted under any circumstances. The boring and drilling work shall be carried out as per IS: 1892-1962.
b) The casing pipe shall be with smooth joints. Elevations of various strata and all levels that are recorded and referred to shall be with respect to the benchmark to be given at any nearby convenient location by the Engineer.
c) During the boring/drilling operation, all samples shall be systematically collected, correctly identified and properly stored.
d) As soon as a bore hole is completed, the contractor shall submit to the Engineer in duplicate a field record of the boring made including identification report of soil stratum by approved field identification procedure as per IS code 1498-1970. In addition a daily progress chart of the work shall be submitted giving the above information.
e) While boring/ drilling, it shall be ensured that the casing does not advance ahead of the bore hole under any circumstances.
f) Before conducting penetration tests or collection of sample from the bore hole, the bottom of the borehole shall be thoroughly cleaned. Cleaning may ordinarily be done by suitable clean-out augers, sand pumps or bailers, Cleaning shall extend to the edge of the casing and shall preferably be slightly deeper than the casing end.

For Undisturbed Samples-

a) Undisturbed soil samples of 100 mm dia. shall be taken as per IS 2132-1972 soon after the bore hole has been cleaned. It shall be sealed and lebelled properly as provided in the referred IS Code. For non-cohesive soils, soil samples may be taken as per IS 1892-1962 or any other approved method.

For ROCK Samples-

a) Rock core samples of 50 mm dia. shall be taken form drill cores and the samples shall be marked to indicate their original position and orientation with respect to the parent rock mass. The samples shall be properly sealed by wax, labelled and stored immediately after collection so that these are moisture proof. They shall be sent for testing in a glass jar or wooden box with saw dust.

FOR DYNEMIC CONE PENETRATION TEST:

The Dynamic Cone Penetration Test will be conducted as per IS 4968 and as directed by Engineer at site.

FOR Gas Detection:

a) While boring/drilling operation, it is necessary to detect the presence of explosive inflammable gases within the soil. During the operation of the boring /drilling the contractor shall arrange to detect the presence of any such gas by any suitable standard method like lowering of a gas detection device inside the bore hole.
b) The contractor may adopt any other alternate method for gas detection, as approved by the Engineer.

For LABORATORY TEST:

a) On Soil samples-
   i) Natural Moisture Content and NCC
   ii) Atterberg Limit
   iii) Specific gravity
   iv) Particle Size Distribution
   v) Direct Shear Test
   vi) Triaxial test
   vii) Natural density
   viii) Unconfined compression test
b) On Rock Samples-
   i) NMC
   ii) Sat. MC
   iii) Specific Gravity
   iv) UCC
   v) Determination of Modulus of Elasticity and Poisson's Ratio
   vi) Point load test
   vii) Abrasion testing

c) The type of actual tests required for each samples and other details shall be given from time to time by the Engineer to the contractor as the work progresses The Engineer reserves the right to test some of the samples in his own laboratory or any other laboratory other than the contractor's at his own discretion.
d) The handling of samples, testing, reporting etc. shall be done as per the latest relevant IS Specifications.
e) Test result shall be submitted to the Engineer on day-to-day basis as the tests get completed.

Reports to be submitted:

a) After completion of the full work the contractor shall submit the results of tests on various samples of each bore hole in a proper tabular form as per relevant IS codes along with his detailed Report in six copies.