



DELHI METRO RAIL CORPORATION LTD.

(A Joint Venture of Govt. of India & Govt. of NCT, Delhi)

“Supply, Installation & Commissioning of Earth Pits and Earth Strips at various Sub-Stations of Delhi Metro Rail Corporation Ltd.”

VOLUME-I

- * **NOTICE INVITING TENDER**
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No. DMRC/O&M/APL/Earth Pits & Strips/ETR0042015



SECTION 1**NOTICE INVITING TENDER (e-TENDER)****1.1 GENERAL**

Delhi Metro Rail Corporation (DMRC) Ltd. Invites sealed open e-Tenders (two bids) from eligible applicants, who fulfill the qualification criteria as stipulated in clause no. 1.2 of NIT, for the work, **"Supply, Installation & Commissioning of Earth Pits and Earth Strips at various Sub-Stations of Delhi Metro Rail Corporation Ltd."**

1.1.1 The details of the Tender are as per following:

Approximate cost of work	:	₹ 23,94,330.00 (inclusive of all taxes)
Tender Security amount	:	₹ 47,887.00
Cost of Tender (Non-Refundable)	:	₹ 5,250.00 (₹ 5,000/- plus 5% VAT)
Completion period of the Work	:	12 months (from 10 th day of issue of letter of acceptance)
Tender documents on sale	:	From 01.05.2015 to 29.05.2015 (up to 11:00 hrs) on e-tendering website www.tenderwizard.com/DMRC . Tender document can only be obtained after registration of tenderer on the website www.tenderwizard.com/DMRC . For further information on this regard bidders are advised to contact 011-49424307, 011-49424365 or 011-23417910
Pre-bid Meeting	:	N/A
Last date of Seeking Clarification	:	20.05.2015 up to 15:00 hrs.
Last date of Issuing Addendum / Corrigendum	:	25.05.2015 up to 15:00 hrs.
Last Date & time of Submission of Tender Online	:	29.05.2015 up to 15:00 hrs.
Date & time of opening of Technical Bid Online	:	29.05.2015 at 15:30 hrs.
Date & time of opening of Financial Bid Online	:	Shall be informed after evaluation of technical bid through website www.tenderwizard.com/DMRC
Authority and place for submission of tender cost, tender security, required documents (if any), seeking clarifications etc.	:	Additional General Manager/Traction, 2nd Floor, Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New delhi-110001.

The tender cost and tender security will be in the form of a Demand draft/ Banker's cheque drawn on a scheduled Commercial Bank based in India and should be in favour of "Delhi Metro Rail Corporation Ltd." payable at New Delhi.

The same should be submitted in original before two hours of opening of technical bid in the office of AGM/TR at the above mentioned address.

NOTE: The bidder who fails to submit the tender cost & tender security (in original) within stipulated scheduled deemed to be rejected.



1.2 **MINIMUM ELIGIBLE CRITERIA :**

1.2.1 Work Experiences -

- a) This tender is open to contractors having experience in this field for not less than 3 years.
- b) The contractor having completed one single work of similar nature of at least 80% of estimated value of contract or two similar works, each of at least 50% of estimated value of contract or three similar works, each of at least 40% of estimated value of contract in Govt. / Semi Govt. / PSU / Private Metro Railway Organization during last 5 years ending March-2015.

Similar Nature of Work: **"Installation and commissioning of earth pits and earth strips or other electrical installation / commissioning works".**

NOTE:

1. Successful completed portion of ongoing works upto March-2015 shall also be considered for qualifying the eligible criteria.
2. Following documents shall be considered for evaluating the criteria of work experience:
 - a. Self attested copies of work order, BOQ along with completion certificate (indicating the name of work, final amount, quantity of work, completion date etc.) issued by the client preferably on their letter head for completed work.
 - b. Self attested copies of work order, BOQ and latest certificate issued by along with completion certificate issued by the client preferably on their letter head for quantum of work executed for work under progress.

1.2.2 Financial Standings -

- a) Contractor's average Annual Turnover of last three audited financial years should be equal to or more than 80% of estimated cost of work.
- b) Self attested copies of VAT / Service Tax registration certificate, PAN No.
- c) Applicant must not have been blacklisted or deregistered by any Govt. or public sector undertaking during last five years. It should be on non-judicial stamp paper of Rs. 10/- duly attested by Notary, in the format enclosed in **Annexure -D**.
- d) Net worth of applicants should be positive. Tenderer shall submit last three years audited financial statement duly attested by certified CA to work out net worth.

Documentary proof of satisfying eligibility conditions and audited financial data to be furnished along with the application on printed letter heads. Testimonials of satisfactory completion should be obtained from an officer not below the rank of executive engineer.

- 1.2.3 The tender submission of bidders, who do not qualify the minimum eligibility criteria, shall not be considered for further evaluation and considered rejected. The mere fact that the bidder is qualified as mentioned in above shall not imply that his bid shall automatically be accepted. The same shall be subject to the data as required for consideration of tender prescribed in the ITT.

The mere fact that the tenderer is Pre-qualified as shall not imply that his bid shall automatically be accepted. The same should contain all Financial & other details as required for the consideration of tender.

- 1.2.4 Tender document consists of the following documents:

VOLUME-I

- a. Notice Inviting Tender
- b. Scope of Work
- c. Tender Prices and Schedule of Payment



VOLUME-II

- a. Instructions to Tenderers
- b. Format of forms
- c. Special Conditions of Contract
- d. Other terms and conditions
- e. Contents of BOQ.

1.2.5 The tenderer shall be governed by the documents listed in **Para 1.2.4 above**.

Please note carefully the requirements for submitting tenders and the date & time for submittal.

- 1.3 The tenderers may obtain further information / clarification, if any, in respect of these tender documents from the office of **Additional General Manager /Traction, 2nd Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi-110001**
- 1.4 The intending bidders must be registered on e-tendering portal www.tenderwizard.com/DMRC. Those who are not registered on the e-tendering portal shall be required to get registered beforehand. If needed they can be imparted training on 'online tendering process'. After registration the tenderer will get user id and password. On login tenderer can participate in tendering process and can witness various activities of the process.
- 1.5 The authorized signatory of intending bidder, as per Power of Attorney (POA), must have valid class-III digital signature. The tender document can only be downloaded or uploaded using Class-III digital signature of the authorized signatory.
- 1.6 Tender submissions will be made online after uploading the mandatory scanned documents towards cost of tender documents such as Demand Draft or Pay Order or Banker's Cheque from a Scheduled commercial bank based in India and towards Tender Security such as Bank Guarantee or Demand Draft or Pay Order or Banker's Cheque from a Scheduled commercial bank based in India and other documents as stated in the tender document.
- 1.7 Tenders shall be valid for a period of as per **ITT clause 12.0** from the date of submission of Tenders.
- 1.8 Tenderer is cautioned that the tender containing any material deviation from the tender document which consists of NIT, Instructions to tenderers, General conditions of contract, Special conditions of contract, Bill of quantities is liable to be summarily rejected as non-responsive.
- 1.9 DMRC reserves the right to accept or reject any or all proposals without assigning any reasons. No tenderer shall have any cause of action or claim against the DMRC for rejection of his proposal.
- 1.10 Tenderers are advised to visit the site before offering their rates.
- 1.11 Bidders shall note that the maximum file size that can be uploaded is 5 MB and in the form of pdf/jpg/jpeg format. All the uploaded files in tender submission should be named properly and arranged systematically.
- 1.12 The bidders are advised to keep in touch with e-tendering portal www.tenderwizard.com/DMRC for updates. Any corrigendum, addendum etc issued shall be part of this tender document and shall be made available on this e-tendering portal.

(SUBODH PANDEY)
AGM / Traction

Delhi Metro Rail Corporation Ltd
2nd floor, Metro Bhawan,
Fire Brigade Lane,
Barakhamba Road,
New Delhi-110001



SECTION 2

SCOPE OF WORK

The contractor will execute the work i.e. **“Supply, Installation & Commissioning of Earth Pits and Earth Strips at various Sub-Stations of Delhi Metro Rail Corporation Ltd.”**

2.1 Brief Scope

- a) The brief scope of work shall be carrying out necessary excavation, providing and fixing of earth electrode with GI pipe and funnel, providing and filling of soil enhancement material, construction of earth pit chambers, Providing earth pit cover, painting of earth pit covers, measurement of earth pit resistance and connecting the earth pit to earth grid/equipments conforming to **IS- 3043**.
- b) The necessary tools and tackles, material and labour required for all the works mentioned hereunder to complete the works upto the satisfaction of DMRC engineer, is in the scope of the contractor. No additional payment will be made for the same.
- c) In case of RSS, new earth strip connection to existing earth pit/equipments shall be carried out during night hour (00:30Hrs to 05:00Hrs) under PTW. Work may also need to be carried out in night hour due to surrounding high voltage structures PTW from DMRC Engineer-in-charge. Nothing shall be paid extra on this account.

2.2 EXCAVATION OF EARTH PITS:

Excavation shall be carried out by means of manual digging the soil where ever is practicable or by means of auguring the soil. After excavation broken lumps and stones, if any, are to be removed from the earth pit.

2.3 PROVIDING AND FIXING OF EARTH ELECTRODE:

- a) The job includes providing of 50 mm diameter NB class B, GI pipe of 3 meters length. Bottom portion of the GI earth electrode is to be made sharp for easy penetration into the soil.
- b) GI Earthing strip of 300 mm (Length) x 6 mm (Thickness) x50 mm (Width) bent to the shape of the pipe and welded at 75 mm from top portion of GI earth electrode. Tapped holes of 10 mm diameter shall be provided on the GI earthing strip for connecting earthing strips to the earth electrode.
- c) Funnel with a mesh shall be provided on the top portion of the earth electrode for watering purpose.
- d) GI earthing strip welded to the earth electrode at the top shall have hot dip galvanized coating of not less than 10 microns thickness.

2.4 PROVIDING AND FILLING OF EARTH ENHANCEMENT MATERIAL:

The job includes filling up of the earth pit with earth enhancement materials after placing the earth electrode in the excavated earth pit. Earth enhancement materials shall be watered and rammed as tight as possible for shall be carried out proper bonding of the electrode with the adjacent soil. Earth enhancement material, provided by DMRC, shall be filled 300 mm in diameter, around electrode in place of soil, charcoal or coke dust.

2.5 CONSTRUCTION OF EARTH PIT CHAMBER:

The job includes providing earth pit chambers, Depth of the earth pit chamber should be 400 mm from the ground level. At locations near ASS, earth pit chamber and cover should be at finished ground level so as not to hinder public/commuter movement at stations.

2.6 PROVIDING EARTH PIT COVERS:

- a) For ASS and Depot Locations: The job includes providing RCC covers on the top portion of the earth pit chamber with suitable handle for lifting arrangement. A base frame of suitable dimensions shall be fixed to the top portion of the earth pit chamber to accommodate earth pit cover. Complete arrangement shall be at ground level. The RCC cover shall be inscribed with “DMRC Earth Pit -PSI”.
- b) For RSS Locations: The job includes providing not less than 6 mm thick Mild steel chequered / cast iron plate on the top portion of the earth pit chamber with suitable handle for lifting

arrangement. A base frame of suitable dimensions shall be fixed to the top portion of the earth pit chamber to accommodate earth pit cover.

- c) The job includes painting of earth pit cover, wherever metallic earth pit covers are provided. For RSS, the earth pit is to be provided with earth pit display board having identification number as per existing practice.
- d) About 70% locations are ASS locations, whereas remaining are RSS and Depot locations. The proportion may vary as per actual site requirement. Nothing shall be paid extra on this account.
- e) Inside portion of the pit shall be cleaned properly.

2.7 IDENTIFICATION OF EARTH PITS:

- a) For RSS and Depot: Earth pit display boards on top of an iron rod duly painted marked with of earth pit number, individual pit resistance, due date for measurement and name of location on the display board shall be provided by the contractor for each individual earth pit.
- b) For ASS: The above mentioned parameters shall be marked on nearest available wall of ASS with white letters with paint in black background.

2.8 MEASUREMENT OF EARTH PIT RESISTANCE:

- a) The job includes measurement of resistance of the new earthpits when connected to grid as well as individually.
- b) The values will be tabulated and submitted to DMRC Engineer-in-charge.
- c) If the individual earth pit resistance is not within the limits (10 ohms) then soil enhancement material shall be added or new earth pit shall be provided.

2.9 SUPPLY & LAYING OF EARTH STRIP:

- a) Supply & Laying of 50x6 mm GI earth strip in various ASS, RSS & Depot of DMRC.
- b) The new earth pit is to be connected with the adjacent earth pit / main earth grid with 50 mm x 6 mm GI earth strip to connect existing earth grid as directed by DMRC Engineer-in-charge.
- c) All hardware (nut, bolt & washer etc.), used for connection/joints except where welding is done, shall be made of stainless steel (SS).
- d) Joints and tapings in the main earth loop shall be made in such a way that reliable and good electrical connections are permanently ensured. All welded joints shall be suitably protected by applying red oxide paint and bitumen.
- e) The earth strip should be laid in at about depth of 150 mm from ground level and to be connected to equipments and earth grid at the installations. After laying of earth strip, concrete floor / brick floor/ soft soil shall be restored. At some locations (like-Wall and roof etc.) earth strip shall be fixed/clamped to the surface with the help of appropriate clamps.

2.10 General:

- a) The quantity of earth strip to be laid at each location will be as per the direction of DMRC engineer.
- b) Welding should be free from defects; the joint is to be properly cleaned.
- c) Bolting of earth strips to be done at end of connecting earth strip to earth pit and also at the other end where earth strips are connected to equipments/structures etc.
- d) Since the work is to be done in different substations located around DMRC lines in NCR region therefore deployment of men, transportation of man & machinery, consumables, welding equipment, drilling machine to various locations necessary for carrying out the job comes under contractor's purview. Power supply, if already available at site, shall be provided to contractor free of cost however if not available then contractor shall make arrangement of power supply at his own cost. Diesel / Petrol for running the mobile DG set used for welding is in the scope of the contractor
- e) The necessary tools and tackles, material and labour required for connecting new earthpits to adjacent pits / main earth grid is in the scope of the contractor. No additional payment will be made for the same.



- f) The contractor at his own cost shall visit DMRC sites, before quoting the tender.
- g) The contractor is responsible for any damage caused while carrying out earth pit jobs.
 - i. Drains, pipes, electrical cables, telephone cables, and similar services encountered in the course of the works shall be guarded from injury by the contractor at his own cost, so that they may continue in full and uninterrupted to the satisfaction of the owners thereof.
 - ii. Should any damage be done by the contractor to any mains, pipes cables or lines (whether above or below ground etc) whether or not shown on the drawings the contractor must make at his cost good the damage without delay to the satisfaction of the engineer-in-charge.
- h) Mobilization advance - No mobilization advance is payable to contractor for the said work.
- i) Permissions - While doing the work, it is the responsibility of the contractor to take the all the necessary permissions/permits from the DMRC engineer of the site.
- j) In some locations, the work may be carried out near Live High voltage bus bars/lines, contractor has to follow all safety rules & regulations etc. and guide his manpower for safe working.



SECTION 3**TENDER PRICES AND
SCHEDULE OF PAYMENT****3.1 Tender Prices**

- 3.1.1 a. unless explicitly stated otherwise in the Tender Documents, the contractor shall be responsible for the whole works, based on the Bill of Quantities and payment shall be as per accepted rates based on the activities carried out as in the BOQ.
- b. The rate quoted by the tenderer shall be inclusive of all duties, taxes, fees, octroi and other levies, materials, labour to & fro transportation of material and labour charges etc. Service Tax, however shall be shown separately in the BOQ.

3.1.2 Schedule of Payment

- A) Payment shall be made through running bills and final bill as per progress of work. Minimum work for R/A bills shall be 30% of contract values.
- B) The payment shall be made subjected to submission of jointly signed report of DMRC Engineer in charge & your representative.
- C) Payment shall be subjected to deduction of all T.D.S as per applicable law.
- D) Joint report with concerned officer / staff shall be made in triplicate duly signed by field staff and concerned officer. Bill along with copy of joint report shall be submitted to MGR/TR-AP for verification and processing the bill for payment.

