

**Contract CT-21: Supply, Installation, Testing and Commissioning of Embedded Rail System at Vinod Nagar, Bahadurgarh and Badli Depot.**

<b>Addendum No. – 2</b>				
<b>(SUMMARY SHEET)</b>				
<b>S.No.</b>	<b>Clause Reference</b>	<b>In place of</b>	<b>Please read as</b>	<b>Remarks</b>
<b>Volume-1 (NIT,ITT &amp; FOT)</b>				
1.	Clause 1.1.3.2 A	Page-3	Page-3R	Clause Modified
2.	Clause 1.1.3.3 Bid Capacity	Page-5	Page-5R	Clause Modified
3.	Clause 1.1.3.3 Bid Capacity	Page-6	Page-6R	Clause Modified
<b>Volume-3 (Particular Specification &amp; Special Technical Specification)</b>				
2.	10.2 Special Technical Specification	PS Page 34 of 34	PS Page 34R of 34	Typographical Correction
3.	10.7 Special Technical Specification	PS Page 34 of 34	PS Page 34R of 34	Clause Deleted
<b>Volume-4 (BOQ)</b>				
2.	Bill of Quantity (BOQ)-Revised			

be permitted at any stage after their submission of application otherwise the applicant shall be treated as non-responsive.

- vi. The contractor will have to associate with him, during operation of contract, a Civil Contractor/Agency for execution of Civil works. The contractor will propose name of a suitable Civil Contractor/Agency along with its credentials, to the Engineer for approval. Approval of the Engineer will be obtained before appointing the Civil Contractor/Agency.
- vii. The contractor will give detailed execution programme of the whole work. He will indicate in the programme, the time/stage of the work when the Civil Contractor/Agency will be deployed by him.
- viii. Any Central / State government department / public sector undertaking / other government entity or local body must not have banned business with the tenderer (any member in case of JV) as on the date of tender submission. Also no contract of the tenderer should have been rescinded / terminated by DMRC after award during last 5 years due to non-performance of the tenderer or any of JV/Consortium members. The tenderer should submit undertaking to this effect in - **Appendix 17** of Form of Tender.
- ix. Tenderer (any member in case of JV/consortium) must not have paid liquidated damages of 10% (or more) of the contract value in a contract due to delay or penalty of 10% (or more) of the contract value due to any other reason during last five years. The tenderer should submit undertaking to this effect in **Appendix-18** of Form of Tender.
- x. Tenderer (any member in case of JV/consortium) must not have suffered bankruptcy/ insolvency during the last 5 years. The tenderer should submit undertaking to this effect in **Appendix-19** of Form of Tender.
- xi. A Tenderer and all partners constituting the Tenderer shall confirm Non-performance of a contract did not occur within the last two (2) years prior to the deadline for application submission based on all information on fully settled disputes or litigation (as per **Appendix 16 of FOT**). A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract and where all appeal instances available to the Applicant have been exhausted.

1.1.3.2 **Minimum Eligibility Criteria:**

**A. Work Experience:** The tenderers will be qualified only if they have completed work(s) during last seven years as on date of tender submission as given below:

(d) *At least one “similar work” \*\* of 1.6 Km or more.*

OR

(e) *Two “similar works” \*\* each of 1 Km or more.*

OR

(f) *Three “similar works” \*\* each of 0.8 Km or more.*

*“Similar works” for this contract shall be Supply, ~~Installation, Testing and commissioning~~ of Embedded Rail system (ERS) with an axle loading of not less than 16T and Minimum Speed 90Km in Embankment/ Tunnel which must be in satisfactory use in any Railway/metro/Sub-urban System **and installation of Ballasted/Ballastless/ERS track jointly or individually by JV/consortium etc (one member shall have experience of supply and other member shall have experience of execution).** The bidder is required to submit satisfactory performance certificate from the concerned operating agency.*

- (iii) **T3 - Net Worth:** Net Worth of tenderer during last audited financial year should be  $\geq$  **Rs. 1.94 Crores**

In Case of JV- Net worth will be based on the percentage participation of each Member.

Example: Let Member-1 has percentage participation = M and Member-2 has = N. Let the Net worth of Member-1 is 'A' and that of Member-2 is 'B', then the Net worth of JV will be

$$= \frac{AM+BN}{100}$$

- (iv) **T4 - Annual Turnover:** The average annual turnover from construction of last five financial years should be  $\geq$  **Rs. 7.78 Crores**.

The average annual turnover of JV will be based on percentage participation of each member.

Example: Let Member-1 has percentage participation = M and Member - 2 has = N. Let the average annual turnover of Member-1 is 'A' and that of Member-2 is 'B', then the average annual turnover of JV will be

$$= \frac{AM+BN}{100}$$

Notes :

- Financial data for latest last five audited financial years has to be submitted by the tenderer in **Appendix-13 of FOT** along with audited balance sheets. The financial data in the prescribed format shall be certified by Chartered Accountant with his stamp and signature. In case audited balance sheet of the last financial year is not made available by the bidder, he has to submit an affidavit certifying that 'the balance sheet has actually not been audited so far'. In such a case the financial data of previous '4' audited financial years will be taken into consideration for evaluation. If audited balance sheet of any year other than the last year is not submitted, the tender may be considered as non-responsive.
- Where a work is undertaken by a group, only that portion of the contract which is undertaken by the concerned applicant/member should be indicated and the remaining done by the other members of the group be excluded. This is to be substantiated with documentary evidence.

#### 1.1.3.3 Bid Capacity Criteria :

**Bid Capacity:** The tenderers will be qualified only if their available bid capacity is more than the approximate cost of work as per NIT. Available bid capacity will be calculated based on the following formula:

$$\text{Available Bid Capacity} = 2*A*N - B$$

Where,

A = Maximum of the value of ~~ERS~~ works executed in any one year during the last five financial years (updated to **31.08.2015** price level assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year).

N = No. of years prescribed for completion of the work

B = Value of existing commitments (**as on 31.08.2015**) for on-going ~~ERS~~ works during period of **8 months w.e.f.01.09.2015**.

Notes:

- Financial data for latest last five financial years has to be submitted by the tenderer in **Appendix-14 of FOT** along with audited financial statements. The financial data in the prescribed format shall be certified by the Chartered Accountant with his stamp and signature in original.
- Value of existing commitments for on-going **ERS** works during period of **8 months w.e.f 01.09.2015** has to be submitted by the tenderer in **Appendix-15 of FOT**. These data shall be certified by the Chartered Accountant with his stamp and signature.
- In the case of a group, the above formula will be applied to each member to the extent of his proposed participation in the execution of the work. If the proposed % participation is not mentioned then equal participation will be assumed.

**Example for calculation of bid capacity in case of JV / Group**

Suppose there are 'P' and 'Q' members of the JV / group with their participation in the JV / group as 70% and 30% respectively and available bid capacity of these members as per above formula individually works out 'X' and 'Y' respectively, then Bid Capacity of JV / group shall be as under:

$$\text{Bid Capacity of the JV / group} = 0.7X + 0.3Y$$

1.1.3.4 The tender submission of tenderers, who do not qualify the minimum eligibility criteria & bid capacity criteria stipulated in the clauses 1.1.3.2 to 1.1.3.3 above, shall not be considered for further evaluation and therefore rejected. The mere fact that the tenderer is qualified as mentioned in sub clause 1.1.3.2 to 1.1.3.3 shall not imply that his bid shall automatically be accepted. The same should contain all technical data as required for consideration of tender prescribed in the ITT.

1.1.4 **The Tender documents consist of :**

**Volume 1**

- Notice Inviting Tender
- Instructions to Tenderers (including Annexures)
- Form of Tender (including Appendices)

**Volume 2**

- General Conditions of Contracts
- Condition of Contract on Safety, Health & Environment (SHE) Ver. 1.2

**Volume 3**

- Special Technical Specifications and Particular specification

**Volume 4**

- Bill of Quantities

1.1.5 The contract shall be governed by the documents listed in Para 1.1.4 above along with latest edition of CPWD Specification, IRS Specifications & MORTH Specifications etc. These may be purchased from the market.

1.1.6 The Tenderers may obtain further information/ clarification, if any, in respect of these tender documents from the authority defined in the Key details above.

1.1.7 The intending tenderers must be registered on e-tendering portal [www.tenderwizard.com/DMRC](http://www.tenderwizard.com/DMRC). Those who are not registered on the e-tendering portal shall be

## **10. Special Technical Specification**

- 10.1 The slab track system infrastructure solution is based upon continuously supported fastener-less Embedded Rail System (ERS) without tie-bars where the rail is completely enveloped in an elastic encapsulation and embedded in a concrete slab, ensuring fastening in all directions and complete decoupling from its surroundings (electrical and vibration protection) and fully complying with EN 13481-5:2012 standard. The elastic encapsulation should be in full contact with the web of the rail and shouldn't include any internal reservation.
- 10.2 The system should be in use on an existing Railway System/Metro System in embankment/tunnel for a period of minimum 5 years with minimum axle load of 16T and minimum speed of ~~95~~ 90 km/h.
- 10.3 The elastic rail support should provide sufficient lateral stability to the rail in straight and curved track sections.
- 10.4 The supplier of embedded Rail System has to give a declaration that life of Embedded Rail System will be as long as the service life of Rail with no maintenance required.
- 10.5 The Embedded Rail System should be completely watertight and there should be no water ingress in the concrete channel or next to the rail.
- 10.6 The Embedded Rail System should provide electrical insulation.
- 10.7 ~~The tenderer will need authorization of supplier of Embedded Rail System meeting the criteria. **One supplier of Embedded Rail System can only authorize a single tenderer.** Deleted~~
- 10.8 The Embedded Rail System has to be compliant
- EN13146-1:2012: Railway applications, Track Test methods for fastening systems part Determination of longitudinal restraint.
  - EN13146-4:2012: Railway applications. Track. Test methods for fastening systems – Part 4: Effect of repeated loading.
  - EN 13146-9:2009 + A1:2011: Railway applications. Track. Test methods for fastening systems –part 9: Determination of stiffness.
  - EN 13481 – 5: 2012: Railway applications. Track. Performance requirements for fastening system – part 5: Fastening systems for slab track with rail on the surface or rail embedded in a channel
  - EN 50122 – 2/A1:2002: Railway applications. Fixed installations. Electrical safety, earthing and the return circuit – part 2: Provisions against the effects of stray currents caused by D.C. traction systems. The embedded track system should provide a Rail-Earth electrical resistivity > 2 Ω km.
- 10.9 The concrete to be used shall be of M-35 or higher grade.
- 10.10 Transition length from ballasted to Embedded Track to be provided by Embedded Rail System contractor after due approval of DMRC.



**DELHI METRO RAIL CORPORATION LIMITED**

**Supply, Installation, Testing and Commissioning of  
Embedded Rail System at Vinod Nagar, Bahadurgarh and  
Badli Depot**

**CONTRACT NO: CT-21**

**TENDER DOCUMENTS**

**VOLUME - 4 (REVISED)**

**REVISED BILL OF QUANTITIES (BOQ)**

## **REVISED BILL OF QUANTITIES**

### **PREAMBLE**

1. The Bill of Quantities shall be read in conjunction with instruction to Tenderers Notice, Inviting Tender, Particular Specification and Special Technical Specification of the tender document.
2. The rates and prices to be tendered in the Unit Priced Bill of Quantities for completed and finished items of work and complete in all respect. It will be deemed to include cost of all plants, labour supervision, materials, transport, all temporary works, erection, maintenance, utility identification, contractor's profit and establishment/overheads together with preparation of design and drawing all general risk, insurance liabilities, compliance of labour laws and obligations set out or implied in contract. If the tenderer fails to quote rates against any item, the tender may be treated as incomplete and non-responsive and shall be rejected.
3. Tenderers shall quote their offer in Indian Rupees (Rs) only.
4. Errors will be corrected by the employer for any arithmetic errors in computation or summation as per contract conditions.
5. All the unit rates and amounts should be filled both in figures and words in case of any discrepancy between the two the value provided in words shall be treated as sacrosanct.
6. All columns in the Bill of Quantities shall be type written and the total tender amount shown in bottom. The person authorized to sign on behalf of the tenderer shall sign in full with company seal and date at the bottom of all pages.
7. The work executed against the BOQ items would be paid on measurement basis.
8. The Contractor may raise their on Account payments on monthly basis as per the status of work on the last day of respective month.

**REVISED BIL OF QUANTITY**

**Sub: Supply, Installation, Testing and Commissioning of Embedded Rail System at Vinod Nagar,  
Bahadurgarh and Badli Depot**

<b>S. No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Rate</b>	<b>Amount (Rs.)</b>
1	Supply, Installation, Testing and Commissioning of Embedded Rail System with UIC 60 IRS - T-12-96 - 880 Grade Rails including concreting, reinforcements etc all complete as per the direction of Engineer in Charge. Rails shall be supplied free of cost by DMRC i/c. flash butt welding/AT welding etc wherever required.	2000	Track Mtr.		
				<b>Total Rs.</b>	



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**PRE BID CLARIFICATIONS ISSUED ALONGWITH ADDENDUM NO.2**

S. No.	Clarification sought	DMRC Comments
1	<p>We understand that the subject tender has been invited by DMRC with the intention of adopting Embedded Rail System of international standards which, we understand, has not been constructed till date in DMRC or anywhere else in India. Clause 1.1.3.2 (A) Pertaining to work experience defines similar work as “Supply, Installation, Testing and commissioning of Embedded Rail System (ERS) with an axle loading of not less than 16T and Minimum Speed 90Km in Embankment/Tunnel which must be in satisfactory use in any Railway/Metro/Sub-urban System”. This is just a repetition of Name of work which the subject tender has been invited.</p> <p>Since the intent of this tender is to encourage and try a new track system in DMRC and India, and since it would be difficult to get a construction company from abroad to come to India for such a low value work, we request that the requirement of work experience for qualification be reviewed and revised as:</p> <p>(a) The proposed Embedded Rail System (ERS), with an axle loading of not less than 16T and minimum speed 90kmph in Embankment/Tunnel, should have been completed and installed in last 7 years (for lengths as specified in Clause 1.1.3.2 (A) d, e &amp;f) and it must be in satisfactory use in any Railway/Metro/sub urban System.</p> <p>(b) The bidder should be a manufacturer/supplier of the proposed Embedded Rail system (ERS).</p>	<p>Kindly refer Addendum No.-2.</p>
2	<p>In clause 1.1.3.3 regarding Bid capacity criteria, the bid capacity is shown to be determined based on Maximum of the value of ERS works executed in any one year during the last five financial years and Value of existing commitments (as on 31,08,2015) for on-going ERS works.</p> <p>Since no such ERS works have been executed in India earlier and considering that normally the ERS supplier and execution agency are different even aboard, we request that the Bid capacity may assessed based on civil construction works in place of ERS works.</p>	
3	<p>We request you to review and revise the provisions of Clause C12.5. It may not be practicable to deploy an expatriate Project Manager having minimum 15 years of total experience out of which 10 years should be in projects of similar nature and at similar level, as the quantum and value of subject work is not much. Similarly, the details of key personnel’s required to be deployed as per Annexure-10 may also please be reviewed and revised considering the small quantum and value of work.</p>	<p>No change in tender conditions.</p>
4	<p>Clause 10.2 reads as “the system should be in use on an existing Railway System/Metro System in embankment for a period of minimum 5 years with minimum axle load of 16T and minimum speed of 95km/h”.</p> <p>This may please be corrected to 90kmph as per various provisions in Volume-1 and Vol-3.</p>	<p>Please refer Addendum No.2. If the minimum speed is indicated as 95 km/h elsewhere in contract documents it should be demmed to be read as 90km/h.</p>

**Contract CT-21: Supply, Installation, Testing and Commissioning of Embedded Rail System at Vinod Nagar, Bahadurgarh and Badli Depot.**

5	Item no. 1 of schedule A of BOQ read as “including concrete & reinforcement steel all complete as per direction of engineer in charge”. Whereas the note below the item description read as “concrete & steel laid as per approved design shall be paid separately”. Kindly clarify this contradiction.	BOQ has been revised. Please refer Addendum No.2
6	Kindly clarify whether items in Schedule – B pertain to RCC work for ERS or items of work other than ERS.	
7	<p>Similar works for this contract shall be supply, Installation, Testing and commissioning of Embedded Rail System (ERS) with an axle loading of not less than 16T and minimum speed 90km in Embankment/Tunnel which must be in satisfactory use in any Railway/metro/sub-urban system. The bidder is required to submit satisfactory performance certificate from the concerned operation agency.</p> <p>The work of embedded track in ballast less Track is done by top down method and is similar to laying ballast less Track. We request that experience of laying ballast less track on a metro system should also be considered a similar work.</p>	Kindly refer Addendum No.-2.