

NOTICE INVITING TENDER (NIT)

(e-Tender)

1.1 GENERAL

1.1.1 Name of Work:

Delhi Metro Rail Corporation (DMRC) Ltd. Invites online open e-tenders from eligible applicants, who fulfil qualification criteria as stipulated in Clause 1.1.3 of NIT, for the work “**Contract: CCM-205 (R)/2014: Civil maintenance works of Line-5 from Kirti Nagar-5 – Inderlok-5 - Mundka Depot and of other allied buildings.**”

The brief scope of the work is provided in Clause 2.0 of NIT.

1.1.2 Key details :

Approximate cost of work	INR 6.00 Crores
Tender Security	Amount of Tender Security: - INR 6.00 Lakhs Validity of Tender Security – 24.12.2016 Tender Security (in original) as per clause C18 of ITT shall be accepted only up to 1500 hrs on 25.04.2016 in the office of Executive Director/Contracts at the address given hereinafter.
Completion period of the Work	36 (thirty six) months
Tender documents on sale	From 23.03.2016 to 25.04.2016 (up to 1100 hrs) on e-tendering website www.tenderwizard.com/DMRC . Tender document can only be obtained online after registration of tenderer on the website www.tenderwizard.com/DMRC . For further information in this regard bidders are advised to contact on 011-49424307, 011-49424365 or 011-23417910
Cost of Tender documents	INR 21,000/- (inclusive of 5% DVAT) Non-Refundable (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) Cost of tender documents i.e., D.D. / Banker's cheque, in original, shall be accepted only up to 1500 hrs on 25.04.2016 in the office of Executive Director/Contracts at the address given here-in-after.
Last date of Seeking Clarifications	05.04.2016 up to 2359 hrs. Queries/clarifications from bidders after due date and time shall not be acknowledged.
Pre-bid Meeting	06.04.2016 at 1100 hrs.
Last date of issuing addendum	11.04.2016
Date & time of Submission of Tender online	25.04.2016 upto 1500 hrs
Date & time of opening of Tender online	25.04.2016 at 1505 hrs.
<ul style="list-style-type: none"> • Authority for purchase of tender documents, seeking clarifications and submission of completed tender documents • Place of pre-bid meeting 	Executive Director/Contracts, Delhi Metro Rail Corporation, 5 th floor, A-Wing, Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi –110 001

1.1.3 QUALIFICATION CRITERIA :

1.1.3.1 Eligible Applicants :

- i. The tenders for this contract will be considered only from those tenderers (proprietorship firms, partnerships firms, companies, corporations, consortia or joint ventures) who meet requisite eligibility criteria prescribed in the sub-clauses of Clause 1.1.3 of NIT. In the case of a JV or Consortium, all members of the Group shall be jointly and severally liable for the performance of whole contract.
- ii. (a) A non-Indian firm is permitted to tender only in a joint venture or consortium arrangement with any other Indian firm having minimum participation interest of 26% or their wholly owned Indian subsidiary registered in India under Companies Act-1956 with minimum 26% participation.

(b) A tenderer shall submit only one bid in the same tendering process, either individually as a tenderer or as a partner of a JV. A tenderer who submits or participates in, more than one bid will cause all of the proposals in which the tenderer has participated to be disqualified. No tenderer can be a subcontractor while submitting a bid individually or as a partner of a JV in the same bidding process. A tenderer, if acting in the capacity of subcontractor in any bid, may participate in more than one bid, but only in that capacity.
- iii. Tenderers shall not have a conflict of interest. All Tenderers found to have a conflict of interest shall be disqualified. Tenderers shall be considered to have a conflict of interest with one or more parties in this bidding process, if:
 - (a) a tenderer has been engaged by the Employer to provide consulting services for the preparation related to procurement for on implementation of the project;
 - (b) a tenderer is any associates/affiliates (inclusive of parent firms) mentioned in subparagraph (a) above; or
 - (c) a tenderer lends, or temporarily seconds its personnel to firms or organisations which are engaged in consulting services for the preparation related to procurement for on implementation of the project, if the personnel would be involved in any capacity on the same project.
- iv. A firm, who has purchased the tender document in their name, can submit the tender either as individual firm or in joint venture/Consortium. However, the lead partner in case of JV shall be one who has experience of similar works as defined in clause 1.1.3.2 A of NIT.
- v. 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-18** of Form of Tender.

- vi. 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-19** of Form of Tender.
- vii. 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-20** of Form of Tender.
- viii. LEAD PARTNER/ NON SUBSTANTIAL PARTNERS/ CHANGE IN JV/ CONSORTIUM
 - a. Lead partner must have a minimum of 26% participation in the JV/Consortium.
 - b. Partners having less than 26% participation will be termed as non-substantial partner and will not be considered for evaluation which means that their financial soundness and work experience shall not be considered for evaluation of JV/Consortium.
 - c. In case of JV/Consortium, change in constitution or percentage participation shall not be permitted at any stage after their submission of tender.
 - d. The tenderer, in case of JV/Consortium, shall clearly and unambiguously define the role and responsibilities for each substantial/non-substantial partner in the JV agreement / MOU submitted vide foot note (d) of **Appendix 6** of Form of Tender, providing clearly that any abrogation/subsequent re-assignment of any responsibility by any substantive/non-substantive partner of JV/Consortium in favour of other JV/Consortium partner or any change in constitution of partners of JV/Consortium (without written approval of Employer) from the one given in JV agreement / MOU at tender stage, will be treated, as 'breach of contract condition' and/or 'concealment of facts' (as the case may be), vide GCC clause 4.33.1 [a (ii) and (iii)] and acted accordingly.

The Employer in such cases, may in its sole discretion take action under clause 4.33.1 (b) and/or under clause 4.33.1(c) of GCC against any member(s) for failure in tenderer's obligation and declare that member(s) of JV/Consortium ineligible for award of any tender in DMRC or take action to terminate the contract in part or whole under clause 13 of GCC as the situation may demand and recover the cost/damages as provided in contract.

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 ending **31.03.2016** as given below:
 - (i)** At least one work of building construction of value Rs. 2.40 Crore or civil maintenance works of Metro Station(s)/ Institutional Building(s)/ Residential Building(s)/ Commercial Building(s)/ Office Building(s)/ any other building(s) aggregating to **Rs. 2.40 Crores** or more.

Note: If the above work(s) have been done by the foreign partner of JV then in that case, the foreign partner must have done works aggregating to equivalent of **INR 2.40 crores** outside the country of origin of the foreign partner.

Notes:

- The tenderer shall submit details of works executed by them in the Performa of **Appendix-16 of FOT** for the works to be considered for qualification of work experience criteria. Documentary proof such as completion certificates from client clearly indicating the nature/scope of work, actual completion cost and actual date of completion for such work should be submitted. **The offers submitted without this documentary proof shall not be evaluated.** In case the work is executed for private client, copy of work order, bill of quantities, bill wise details of payment received certified by C.A., T.D.S certificates for all payments received and copy of final/last bill paid by client shall also be submitted.
- Value of successfully completed portion of any ongoing work up to **31.03.2016** will also be considered for qualification of work experience criteria.
- For completed works, value of work done shall be updated to **31.03.2016** price level assuming 5% inflation for Indian Rupees every year and 2% for foreign currency portions per year. The exchange rate of foreign currency shall be applicable 28 days before the submission date of tender.
- In case of joint venture / Consortium, full value of the work, if done by the same joint venture shall be considered. However, if the qualifying work(s) were done by them in JV/Consortium having different constituents, then the value of work as per their percentage participation in such JV/Consortium shall be considered.
- If the above work(s) (i.e., Contract for maintenance of civil works of Metro Station(s) / Institutional Building(s)/ Residential Building(s)/ Commercial Buildings/ Office Buildings.) comprises other works, then client's certificate clearly indicating the amount of work done in respect of the similar work shall be furnished by the tenderer in support of work experience along-with their tender submissions.

B. Financial Standing: The tenderers will be qualified only if they have minimum financial capabilities as below:

- (i) **T1 – Liquidity:** It is necessary that the firm can withstand cash flow that the contract will require until payments received from the Employer. Liquidity therefore becomes an important consideration.

This shall be seen from the balance sheets and/or from the banking reference. Net current assets and/or documents including banking reference (as per proforma given in Annexure-8 of ITT), should show that the applicant has access to or has available liquid assets, lines of credit and other financial means to meet cash flow of **Rs. 29 lakhs** for this

contract, net of applicant's commitments for other Contracts. Banking reference should contain in clear terms the amount that bank will be in a position to lend for this work to the applicant/member of the Joint Venture/Consortium. In case the Net Current Assets (as seen from the Balance Sheets) are negative, only the Banking references will be considered. Otherwise the aggregate of the Net Current Assets and submitted Banking references will be considered for working out the Liquidity.

The banking reference should be from a Scheduled Bank in India or (in case of foreign parties) from an international bank of repute acceptable to DMRC and it should not be more than 3 months old as on date of submission of bids.

In Case of JV- Requirement of liquidity is to be distributed between members as per their percentage participation and every member should satisfy the minimum requirement.

Example: Let member-1 has percentage participation = M and member-2 has percentage participation = N.

If minimum liquidity required is 'W' then liquidity of member-1 $\geq \frac{W M}{100}$
and liquidity of member-2 $\geq \frac{W N}{100}$.

- (ii) **T2 - Profitability:** Profit before Tax should be **Positive in at least 2 (two) years**, out of the last five audited financial years.

In Case of JV: The profitability of only lead member shall be evaluated.

- (iii) **T3 - Net Worth:** Net Worth of tenderer during last audited financial year should be \geq **Rs. 40.00 lakhs**

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. 1.60 Crore**.

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-17 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 original with membership number. 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 construction works executed in any one year during the last five financial years (updated to **31.03.2016** 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 31.03.2016**) for on-going construction works during period of **36 months w.e.f. 01.04.2016**.

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 with membership number.
- Value of existing commitments for on-going construction works during period of **36 months w.e.f. 01.04.2016** 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 original with membership number.
- 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
- Special Conditions of Contract (including Schedules)
- Condition of Contract on Safety, Health & Environment (SHE) Ver. 1.2

Volume 3

- Bill of Quantities

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

1.1.7 The tenderers may obtain further information/ clarification, if any, in respect of these tender documents from the office of **Executive Director/Contracts**, Delhi Metro Rail Corporation, 5th floor, A-Wing, Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi –110001.

1.1.8 All tenderers are hereby cautioned that tenders containing any material deviation or reservations as described in Clause. **E 4.0** of “Instructions to Tenderers” and/or minor deviation without quoting the cost of withdrawal shall be considered as non-responsive and is liable to be rejected.

1.1.9 The intending tenderers 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.

1.1.10 The authorized signatory of intending tenderer, 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.

- 1.1.11 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.
- 1.1.12 Cost of Tender Documents and Tender Security tenders shall not be accepted after date and time of submission of bid under any circumstances.
- 1.1.13 Tenders shall be valid for a period of **180 days** (both days inclusive i.e. the date of submission of tenders and the last date of period of validity of the tender) from the date of submission of Tenders and shall be accompanied with a tender security of the requisite amount as per clause C18 of ITT.
- 1.1.14 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.

2.0 **Scope of work**

The Scope of Work is "Maintenance Contract for Civil Works of Line-5 from Kirti Nagar-5 – Inderlok-5 - Mundka Depot and other allied buildings."

The brief scope of work is mentioned in DSR/BOQ and as per site requirement. The work under this contract shall consist of, but not limited to, all materials, labours, equipment's, tools plants and necessary machinery as required to completely execute following works:

- (i) The work includes maintenance activities that may arise at 16 metro stations of Line-5, viaduct area and Mundka Depot.
- (ii) Day- to-Day maintenance activities that arise due to operation shall constitute of following: -
- Missing and worn out Tactile, Yellow strip and Granite/Kota stones, to be provided.
 - Missing and worn out down take drain pipes at plumbing shaft etc. area to be provided.
 - Missing and broken paver blocks, kerb stone and manhole covers at ground level to be provided.
 - Patch or full scale painting (back up area, circulation area, facade area etc.) may be required.
 - Sanitary items in toilet may be required to be replaced or toilet may be required to be renovated as per direction of engineer – in – charge.
 - False ceiling strengthening (if required) and false ceiling painting at concourse level & back up rooms.

The above work shall cover the following:

- a) Provision of all necessary labours, construction equipment, instruments and appliances in connection with all above mentioned work as specified or as directed by Engineer-in-Charge or the representative of Engineer.
- b) In case of major addition/alterations the drawings including details of structural drawings may be supplied by DMRC.
- c) Any other item of work as may be required, to be carried out as per CPWD specifications, for completing the job in all respects in accordance with the provisions of contract and or to ensure the structural stability and safety of the work during and after construction.
- d) CPWD Specifications will be applicable for methodology of execution of work for all DSR items. For NDSR items methodology as per relevant IS codes or structural drawing with method statement shall be provided by Engineer in charge.
- e) Clearing site after completion of work and handing over of all the works, as specified and directed by Engineer in charge.
- f) Damage caused to properties of DMRC if any, during execution of above work shall be rectified by the contractor at his cost failing which the cost of rectification shall be recovered at market cost of such items from the next R/A Bill / Final Bill of the work contract.
- g) The work shall be carried out as and when required by DMRC with all safety precautions. The contractor shall ensure all his workers shall have Personal Protective Equipment's (PPE's) at his cost (not to be charged to the worker) and ensure safety of site by providing Barricades for restricting movement of public to work area. The barricade arrangement shall be approved by Engineer in charge keeping in view the overall circulating pattern of the commuters in the station.
- h) Defect liability period shall be one year for new work & six months for maintenance work from the date of issue of completion certificate, for all the items supplied and works carried out.
- i) All regular minor and major repairs at stations i.e. upkeep will be contractor's responsibility and it should be ensured by deploying his staff with instruction for frequent inspection. Further before attending the deficiencies he should inform concern DMRC official so as to ensure quality and timely billing of work done.
- j) Any addition / alteration / construction work carried out in the Bill of Quantities.
- k) The scope of the contract includes periodical inspection of the premises by the contractor himself, identifying the defects, make a proposal to the engineer, obtain his approval and carry out the work. In general, responsibility of the station building kept cleaned and updated position will rest with the contractor.

In addition, the defects noticed by DMRC officials will also be endorsed in the Complaint Book being maintained at the Station Controller's office which should be acknowledged by the representative of the contractor along with the indication of time which it would be attended to. Complaints of regular nature, if continues, will be considered as discredit to the contractor.

In addition, the monthly joint inspection will be carried out by DMRC officials and items identified should be informed to the contractor along with the specified time during which it

can be attended. This will be an item of the regular check during the next monthly inspection. These items shall be recorded in Site Order Book / Complaint and Progress Monitoring Register maintained at field office.

- l) Minimum Level of inventory maintained at site office

INVENTORY LIST

Minimum Quantity of following items to be kept as needs required in store of contractor's:-

S.No	Items	Details	Quantity
1	Stone(granite, kota, marble red stone etc)	All colours and thickness used in his section	10sqm each
2	Tiles- wall and floor	All colours and thickness used in his section	1 box each
3	False ceiling	All colours and thickness used in his section	10 sqm each
4	Sanitary fittings	All fixture used in his section	5 nos. each types
5	Door closer	All type used in his section	5 nos. each types
6	Door locks	All types used in his section	5 nos. each types
7	Safety equipments (PPE, CAUTION TAPE ETC)		5 nos. each types
8	G.I. Pipes	All types used in his section	5 nos. each
9	Ceramic Tiles	All types used in his section	10 sqm each type
10	Vitrified Tiles	All types used in his section	10 sqm each type
11	Synthetic Enamel	All types used in his section	20 litres each type
12	Plastic Emulsion Paint	All types used in his section	10 litres each type
13	Internal / External Paints	All types used in his section	10 litres each type
14	Sanitary Installation	All types used in his section	5 Nos each types

Issue /receipt and upkeep of store items shall be responsibility of contractor.

The colors and thickness of stone, tiles, false ceiling and type of doors, sanitary and water supply fittings shall be intimated at the time of start of work.

2.1 Material

2.1.1 Quality

All materials used in the works shall be of the quality of their respective kinds as specified in CPWD specifications, obtained from sources and suppliers approved by the Engineer and shall comply strictly with the tests prescribed in the Technical Specifications/Codes of Practice.

All materials used in DMRC stations during construction stage are approved materials. In addition, to materials used to construct DMRC stations. Some of the additional approved sources/vendors of materials are as follows:

VENDOR LIST

S.No.	Details of Materials/ Products	Manufacturer's Name / or Equivalent specification
1.	Adhesive	Pidilite, Araldite ,
2.	Flush Doors	Samrat,Kanchan Prima Swastik, Kutty, Diamond, Raveela, Alpro.1
3.	Gypsum Board	India Gypsum Limited , GYPROC, Saint Gobain or equivalent
4.	Aluminium Sections	Indian Aluminium Co./Hindustan Aluminium/Jindal
5.	Float Glass	Float Glass India Ltd/Asahi Float/Modiguard Reliable Safety Glass Ltd/Glaverbell/Saint Gobain/Tata Float.
6.	Powder Coatings	Berger/Nerocoat/Jenson and Nicholson
7.	Tile Joint Filler	Bal Adhesives and Grouts/"Roff Rainbow Tile Male" of Roff Construction Chemicals Pvt. Ltd/Winsil 20/Silicon Sealant of CE Bayer Silicon/"Zentrival FM" or MC Bauchemie (India)Pvt.Ltd/Laticrete, Ferrous Crete.
8.	Ceramic Tiles	Kajaria/Bell/Johnson/Nitco/Naveen/Somany/ Orient
9.	Vitrified Tiles	"Naveen Diamontile" of Murudeshwar Ceramics Ltd./"Granamite of Restile Ceramics Limited/"Marbo Granit" of Bell Granito Ceramica Ltd./Kajaria, NITCO.
10.	Synthetic Enamel	ICI Dulux Gloss/Berger/Asian/Nerolac/Jenson and Nicholson
11.	Interlock Paving Tiles	Unistone/CCC Builders Merchant Delhi Pvt. Ltd./Nimco Prefab.
12.	Door Fittings	Dorma, Hafele,Doorset,Dline./Godrej/Classic
13.	Cement	L&T,ACC,GRASIM,Gujrat Ambuja, Birla (Ordinary Portland Cement of Grade 43.
14.	Reinforcement Bars	TISCO,SAIL,RINL,IISCO
15.	Admixture	FORSOC,MBT,Asian Lab, MC Bauchemie,Chembond.
16.	Structural Steel	TATA, SAIL,ESSAR, JINDAL,RINL,IISCO
17.	Welding Electrodes	ADVANI,ESAB-MODI-ARC/Weld Excel India
18.	Ready-Mix Concrete(RMC)	ACC,Unitech,Grasim,LandT,Jindal
19.	Internal and External Paints	Berger/Asian/Nerolac/Jenson and Nicholson.
20.	PVC Doors	M/s. Rajashri Forex Ltd. or equivalent, SYNTEX, CACTUS.
21.	Plastic Emulsion Paint	Berger,Asian, Nerolac,Jenson and Nicholson, ICI , Dulux

22.	Sanitary Installations	Hindustan Sanitary Wares and Industries Ltd, CERA
23.	G.I. Pipes	Jindal Pipes Ltd, TATA, Prakash, Surya
24.	G.I. Pipe Fittings	UNIK make or equivalent.
25.	Water supply Fittings	Heavy Duty Industrial fittings of Jaguar or equivalent make, Parko, Hindware, Pariware, Cera, Roca ETC

In case of non-availability of specified materials the alternative material should be used with the prior approval of Engineer in charge. The approval should be obtained in writing. If any material is used without approval it will not be paid by DMRC.

2.2 Sampling and Testing

In addition to Test certificates, samples of all materials proposed to be employed in permanent works shall be submitted to the Engineer when called for. In such cases, materials will not be brought to the site without prior approval of the Engineer.

Samples provided to the Engineer are to be labeled in boxes suitable for storage. Materials or workmanship, not corresponding in character and quality with approved samples, will be rejected by the Engineer.

Samples required for approval and testing must be supplied at least 45 days in advance to allow for testing and approval. Delay to the works arising from the late submission of samples will not be acceptable as a reason for delay in completion of the works.

The contractor will bear all expenses for sampling and testing, whether at the manufacturer's premises at source, at site or at any testing laboratory or institution as directed by the Engineer. The payment shall be reimbursed on this account by DMRC if the test results are satisfactory. If the test results are not satisfactory, the testing charges shall be borne by contractor.

2.3 Rejection

Any materials that have been found not to conform to the specifications will be rejected forthwith and shall be removed from the site by the contractor at his own cost within 15 days

2.4 Workmanship

All works shall be true to level, plumb and square and the corner, edges and arises in all cases shall be unbroken and neat and shall be as per provisions in the relevant Technical Specifications / Standard Codes of Practices. Contractor shall also submit Quality Assurance Programme and Methods Statements for special works to be done within MC within 7 days of acceptance of tender before the start of work for approval of Engineer-in-Charge.

2.5 Penalty

2.5.1 Penalty for non-attending the works within the minimum time as mentioned for the different stage of works after issue of work orders by the competent authority or for the poor quality or poor safety of works, will be levied at 10% of the different work orders value or decided by engineer-in-charge subject to maximum of 10% of contract value.

2.5.2 This penalty shall not relieve the contractor from his obligation to execute the works or from any other of his obligations and liabilities under the contract.

2.5.3 The Contractor shall co-ordinate his programme to the extent feasible with the programmes of other contractors to be engaged at the site or in the vicinity of the site, as furnished by the Engineer so that the works can be carryout as per the overall program.

2.6 CONTRACTOR'S OFFICE

2.6.1 The Contractor shall establish an office in the National Capital Territory of Delhi in consultation with the incharge for planning, co-ordination and monitoring the progress of the Work and intimate the same in writing to incharge.

2.6.2 In addition, the Contractor shall also set up field offices at convenient and approved locations at respective lines for co-ordination and for monitoring the progress of maintenance work at his own cost. The space for the office shall be provided by DMRC free of cost. This office shall be manned by contractor staff consisting of One manager, One Supervisor and one helper cum beldar. One Helper cum beldar shall be available round the clock. The cost of providing such man power shall be borne by the contractor. Nothing extra shall be provided by DMRC. The contact number / Mobile number of manager/supervisor shall be intimated in writing to DGM/C&S or his authorized representative. Identity card shall be issued to to these staff by DMRC on submission of application in prescribed format and payment of requisite fee.

2.6.3 One **"Site Order Book / Complaint and Progress Monitoring register"** shall be maintained at field office. All complaints should be recorded in this register and should be attended to within instructions any reasonable time as specified. Failure to attend the complaint within the specified time period shall attract penalty at the rate of 10% of estimated cost of that item. In addition to that, the work shall be executed at the risk and cost of contractor. Repeated failure to execute the work within specified time shall lead to termination of contract. The works noted in complaint register shall be in addition to regular works as per clause 16.0 of SCC.

2.7 STORAGE OF DISMANTLED MATERIAL

Storage of dismantled materials will be the responsibility of contractor. Dismantled material so accumulated is to be submitted to STORES of DMRC on quarterly basis or more frequently if order by engineer-in-charge or representative in this case JE/ASE/Work on the contractor cost after getting written permission from O/o Engineer-in-charge.

2.8 SCHEDULE OF INSPECTIONS

All the stations/work site must be inspected jointly by contractors and DMRC representative and inspection note shall be issued jointly. All the defects appearing in inspection note shall be rectified within specified time, The progress will be checked during the next monthly inspection. The proforma of Inspection shall be provided by Engineer in charge.

2.9 Security of the Site

The Contractor shall take all measures necessary to ensure such security, including exercising control over all persons and vehicles which are employed or engaged on the Site or in connection with the Works or the other works comprising the Project and with the security arrangements applicable to any other site within the Project.

If required by the Engineer, the Contractor shall submit a list identifying all persons to whom passes have been issued together with two photographs of each person and all entities to which a pass has been issued in respect of any vehicle and shall satisfy the Engineer of the bonafides of any such person or entity.

All lights provided by the Contractor shall be so placed or screened as not to interfere with signs, signals or lights. The Contractor shall not in any way obscure or affect signs, signals or lights, in use by any relevant authority. In the event that the Contractor does so, the Contractor shall pay all costs associated with the re-setting, re-instating or provision of alternatives for any sign, signal or light, obscured or affected.

**Executive Director/Contracts
Delhi Metro Rail Corporation Ltd.**