

JAIPUR METRO RAIL CORPORATION LIMITED NIB No.: 01/JMRC/Project/2022-23

GENERAL:-

- (i) Jaipur Metro Rail Corporation invites open bids from interested and eligible agencies for Geo-technical Investigation work for Extension of E-W Corridor from Badi Chouper to Transport Nagar (2.85Km) Phase-1C and Mansarovar to Ajmer Road (Chauraha) (1.35 km) Phase-1D" of JAIPUR METRO RAIL CORPORATION at Jaipur. This bid is invited under RTPP Act-2012, and RTPP Rules, 2013 (Complied up to date).
- (ii) The complete bid document can be downloaded from the state e-procurement website <u>https://eproc.rajasthan.gov.in</u> and interested bidders will have to submit their offer in electronic formats both for technical and financial proposal on this website with their digital signatures. The complete bid document can also be seen on Corporation's website <u>https://transport.rajasthan.gov.in/jmrc</u> and state procurement portal i.e., <u>https://sppp.rajasthan.gov.in</u>.
- (iii) Bidders who wish to participate in this bidding process must register on https://eproc.rajasthan.gov.in. To participate in online Bids, as per Information Technology Act, 2000, Bidders will have to obtain Digital Signature Certificate (DSC) from any agency approved by Controller of Certifying Authorities (CCA). Bidders who already have a Valid Digital Signature Certificate need not to obtain a new Digital Signature Certificate. This DSC will be used by the bidder to digitally sign the bids before its online submission on E-Proc Portal.

1.0 NOTICE INVITING BID (NIB) FOR OPEN ONLINE BID:- (KEY DETAILS)

(a) `	Name & Address of the Procuring Entry	Office of General Manager (Project Coordination),
		Jaipur Metro Rail Corporation Ltd., 1 st Floor, A-Wing, Admin Building, Bhrigu Path, Mansarovar Metro Depot, Jaipur- 302020
(b)	Subject Matter of Procurement.	Geo-technical Investigation work for Extension of E-W Corridor from Badi Chouper to Transport Nagar (2.85Km)
	(Name of Work)	Phase-1C and Mansarovar to Ajmer Road (Chauraha)(1.35 km) Phase-1D" of JAIPUR METRO RAIL CORPORATION at Jaipur.
(c)	Time Period	45 Days from the date of LOA or as per the directions contained in the LOA.
(d)	Defect Liability Period	06 months from the date of issue of taken over certificate by JMRCL [Refer Clause-09 of GCC].
(e)	Bid Procedure	Two Stage (Technical Bid & Financial Bid),
		Online Open Bid Procedure.
(f)	Bid Evaluation Criteria	Technically Qualified and
		Lowest Rated Bidder (L-01)
(g)	Website for downloading Bidding Document, Corrigendum's, Addendums, etc.	https://eproc.rajasthan.gov.in; https://sppp.rajasthan.gov.in;

(h)	Cost of Bid Form	For participating in the bid, the bidder has to pay cost of bid
()	(Non-Refundable)	form as below:-(a) Cost of Bid Form: - Rs. 1000+ GST@18%= Rs 1180/- Rupees. (DD/BC of scheduled bank payable in favour of Jaipur Metro Rail Corporation Limited).
(i)	Estimated cost	INR 40,54,344.75/- (Inclusive of all taxes & other charges)
(j)	Bid Security Deposit (EMD) (Refundable to unsuccessful Bidder)	Amount (INR): 02% (Rs.81,087/-) of Estimated Procurement Cost.(DD/BC of scheduled bank payable in favour of Jaipur Metro Rail Corporation Limited or as per RTPPR-2013)
(k)	E-Bid Processing Fee (Non Refundable)	Rs.590/- (Including GST @ 18%) (Rs. Five Hundred Ninety Only) by Demand Draft / Bankers Cheque, payable in favour of " Managing Director, RISL, Jaipur "
(I)	Venue of Physical Submission of Cost of Bid Form, Bid Security and E-Bid Processing Fee and original hardcopy of same as uploaded on E-Proc website by the bidder.	At Office of General Manager (Project Coordination), Jaipur Metro Rail Corporation Ltd., 1 st Floor, A- Wing, Admin Building, Bhrigu Path, Mansarovar Metro Depot, Jaipur-302020. Mobile No-: +91-9650992378; 7728895359; Tel:-0141-2822786/788 Up to Date:18.03.2023; Time:-15:00 Hrs
(m)	Publishing Date on E-Proc Portal, SPPP Portal and JMRC Website.	Date:08.03.2023; Time:-10:00 Hrs
(n)	Document Sale/ Download/ Cost of Bid Form deposition period.	From Date:08.03.2023; Time:-10:00 Hrs To Date:18.03.2023; Time:-15:00 Hrs
(0)	Online Bid Submission Period on E- Proc Portal of Rajasthan Government.	From Date:08.03.2023; Time:-10:00 Hrs To Date:18.03.2023; Time:-15:00 Hrs
(p)	Online Technical Bid Opening Date and Time	Date:18.03.2023; Time:-15:30 Hrs
(q)	Bid Validity	90 days from the bid submission dead line.
(r)	Bidders Eligibility: -	Documents required to be submitted: -
	(i) Cost of Bid Form, Bid Security Deposit and E-Bid Processing Fee	 (i) As per Clause 1.0 (h), Clause 1.0 (j) and Clause 1.0 (k) in original to JMRC before the due date and time for the bid submission as per Clause 1.0 (l) & (o) of NIB of Bid Document.
	 (ii) Similar Work: - The bidder firm should have experience of Execution of Geo- technical Investigation work in India for state/Central Government Bodies etc. Experience of having satisfactorily completed similar works during the period of last 05 Years reckoned from the date of last date of bid submission should be either of the following: 	(ii) Self certified copies of Certificates for satisfactory completion of similar works (Completed during the period of last 05 Years reckoned from the date of last date of bid submission) issued by the authorized person of the department/institution not below the rank of Executive Engineer.

NIB No.:01/JMRC/Project/2022-23 Notice Inviting Bid (NIB) & Scope of Work – <u>Schedule-A</u>

Three similar* completed works as mentioned below each		
not loss than the amount equal to Ps		
16 22 Jakh (10% of the estimated cost		
$P_{e} = 40.54 \text{ lakh}$ Or		
Two similar completed works each		
Two similar completed works each		
to Do 20 27 lock (50% of the estimated		
to RS. 20.2/10KII (50% of the estimated		
Cost. RS. 40.54lakn) Of		
One similar completed work each		
costing not less than the amount equal		
to Rs. 32.43IaKn (80% of the estimated		
COSI. RS. 40.54IAKN)		
Definition of Similar Work will be treated		
as. Geolecinical investigation, which		
in various types of strata conducting		
various soil/rock tests including		
laboratory tests and analyzing and		
submission of geotechnical data.		
Each substantial partner in case of		
JV/Consortium shall have experience of		
executing at least one "similar work" of		
minimum 40% of NIB value in last 05		
years.		
(iii) The bidder firm maybe: -	(iii)	Self-attested copy of registration document as proof of
-Company registered under "Companies		registered firm for the similar work. (Copy of
Act-1956/2013"; OR		Pagistration cartification of the firm / Partnershin
		Registration certification of the mini / Partiership
- Registered Sole proprietor; OR		deed / Certificate of incorporation, Copy of
- Registered Sole proprietor; OR -Registered Partnership/Joint Venture		deed / Certificate of incorporation, Copy of Articles of Association & Memorandum of
- Registered Sole proprietor; OR -Registered Partnership/Joint Venture Firm. And must be in existence for the execution of similar works for minimum		deed / Certificate of incorporation, Copy of Articles of Association & Memorandum of Association (if applicable) etc.).
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	(v) Manda bidder	tory Registrations of the (v) such as "Goods & Service	Self-Certified Copy of:- -GST Registration mentioning GST number in name of
	Tax Regist	(GST) and income Tax	Blading Firm.
	Registi Bank A	Account of bidding firm	-Copy of PAN Card. -Self certified copy of the statement of Bank Account
	Dank F		for the Last Six Months in the name of bidding firm.
	Note:- (a) For po	pint no (iii) above in case of t	bidder is JV/consortium: the above documents shall be
	mandatoril bidder in h group (Join be conside be substar specific div then the po agreement bidder/part	y submitted for all the constituent is own name should be indicated nt Venture), only that portion of the ered and the remaining done by the ntiated with a specific certificate vision of works undertaken by the ercentage participation of the bido t or Client certificate) shall be ther of JV.	t members. Only the value of contract as executed by the and shall be considered. Where a work is undertaken by a e work which is undertaken by the concerned bidder shall he other partners of the group shall be excluded. This is to from the Employer who have awarded this work. In case group partners is not stated in the submitted documents, her in the group as stated in the submitted documents (JV/ considered as the value of the work done by the
	(b) The bid days of iss 1st Runnin Firm is requ	der is required to get its firm regi uance of LOA. If the bidder does g Account (R/A) payment shall n uired to submit an undertaking in t	stered for EPF, ESI and Contract Labor license within 15 not get registered with these Statutory Authorities then its ot be released till it get registered with these Authorities. his regard on its letter head.
(s)	SUBMISSI Online bids submitted below. The (i) Firs	ION OF BIDS:- s will have to be digitally stamped in a time stamped electronic seal a Bidder shall submit his signed at Part:- Technical Bid with all new	and signed by the authorized signatory of bidder firm and ed box on http://eproc.rajasthan.gov.in in the manner as I and stamped bid online in two parts:- cessary documents in .pdf format (Self Certified/Signed by
	auth insti Clai Doc	norized Signatory of Firm) as p ruments such as Cost of Bid F use 1.0 (h, j, k & I) of NIB , cor cument (Except Schedule-G/Pric	ber Clause 1.0 (r) of NIB, Scanned Copy of financial form, E-Bid Processing Fee and Bid Security as per nplete bid document as per Clause 1.1.1 of ITB of Bid e Bid/BoQ) and;
	(ii) Sec Raja on c	c ond Part :-Financial Bid in electro asthan Government to procuring (or before the last date of bid subm	onic format. (.xls Format), Online through E-Proc Portal for entity of JMRC as per Clause 1.0 of NIB of Bid Document ission.
	Note:		
	(1)	Original Copy of DD/BC for Co uploaded on E-Proc website ma date of submission as per Claus	est of Bid Form, E-bid Processing Fee & Bid Security as ay also be submitted at the office of JMRCL before the due se-1.0 (I) of NIB Document.
	(ii)	The bidders have to take utmos in Second Part of Bid i.e Finan Bid whether intentionally/ unir Technical Bid by the bidder; correspondence in such matter	st care that the Financial Bid is to be submitted separately cial Bid on E-Proc website only. If any details of Financial tentionally/ by mistake are mentioned in First Part i.e then its bid shall not be considered by JMRC. No shall be entertained by JMRC.
(t)	POINTS TO	D BE NOTED:	
. /	(i) Bidder Secon techni	r (authorized signatory) shall su d Part:-Financial Bid) online on cal and financial proposals separa	bmit their Two Part Bid (First Part:-Technical Bid and E-Proc website i.e. https:// eproc.rajasthan.gov.in both for ately for each.
	(II) In cas	ity to JMRC, its Bid shall not be c	onsidered and shall be rejected.
	(III) JMRC (iv) The pi	will not be responsible for delay i rocuring entity reserves the comp ds	n Bid submission due to any reason. lete right to cancel the bid process and reject any or all of
	(v) Condi	tional Bid shall be summarily reject	ted by JMRC.

- (vi) No contractual obligation whatsoever shall arise from the bidding document/ bidding process unless and until formal contract is signed and executed between the procuring entity and the successful bidder.
- (vii) All Bidders are hereby cautioned that Bids containing any material deviation or reservation as described in–Form-B and /or minor deviation without quoting the cost of withdrawal shall be considered as non responsive and shall be summarily rejected.
- (viii) Any Bid received with unattested cutting/ overwriting shall be rejected.
- (ix) Procurement entity disclaims any factual/ or other errors in the bidding document (the onus is purely on the individual bidders to verify such information) and the information provided therein are intended only for the help the bidders to prepare a logical bid-proposal.
- (x) The provisions of RTPP Act 2012 and RTPPR-2013 Rules thereto shall be applicable for this procurement. Furthermore, in case of any inconsistency in any of the provisions of this bidding document with the RTPP Act 2012 and RTPPR-2013 Rules thereto, the later shall prevail.
- (xi) Approved GCC and SHE is uploaded and available on the JMRC website, by signing the Bid Document, firm agrees to accept the GCC & SHE. While framing the contract with the successful Bidder, the bidder shall sign the complete GCC & SHE document and submit it to the JMRC.

1.1 Eligible Applicants:

i. The bid for this contract will be considered only from those bidders (proprietorship firms, partnerships firms, companies, corporations, consortia or joint ventures) who meet requisite eligibility criteria prescribed in the sub clauses of clause 1.0 (r) of NIB. 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.

Also each member shall be individually responsible for its duties as specified in MOU/JV agreement submitted by the Bidder in terms of clause 1.1 (v) d.

Performance of each JV/consortium shall also be judged on quarterly basis. In case, the performance of the partner(s) is not found satisfactory, actions as deemed appropriate by the employer may be taken including termination of contract or termination of any of JV/Consortium member(s) from the contract i.e. Part termination of the contract. In case of part termination of contract, the performance security(ies) submitted by the member(s) for their portion of work in contract as per their share in JV/Consortium shall be forfeited and the scope of the work/ duties assigned to the defaulting JV/Consortium member(s) as per the MOU/agreement submitted, may be terminated, however, same may be done by the employer only if other member(s) of JV/Consortium are ready to complete the entire scope of work. In such a case remaining works pertaining to the scope of defaulting member of JV, may be completed by other member(s) of JV in the following manner:

- a. At their own, if they have adequate technical competence to the satisfaction of Employer.
- b. By subcontracting such scope of work of defaulting member(s) to technically competent agency with the consent of Employer & without any financial implication to the Employer. In such cases, the limit of subcontracting the works up to 50% of total scope of work shall not apply.
- c. By induction of new member having adequate technical competence and meeting the original bid eligibility conditions, acceptable to the Employer in JV/Consortium replacing the default members(s)& without any financial implication to the Employer. The new member(s) shall be jointly and severally liable for the performance of the whole contract and also shall submit the Performance Security from their bank account for an amount equivalent to the amount of forfeited amount of Performance Security of defaulting member.

In case of (a) and (b) above, forfeited amount of Performance Security (ies) of the defaulting member(s) shall be submitted by other member(s) of the JV/Consortium.

Further, the performance of each of JV/Consortium member may also be specifically stated in the Work experience Certificate / performance Certificates which may be issued to the bidder during or after execution of Work for their Business Development purposes(s).

In this regard, an undertaking by JV/Consortium members is required to be submitted as per the format Form E of Form of Bid.

a) Only Indian bidders permitted to bid, either individually as a bidder oras a partner of JV. Joint venture or consortium arrangement is permitted only with firms that are registered or incorporated in India having minimum participation interest of 20% in this bid.

b) A bidder shall submit only one bid in the same bidding process, either individually as a bidder or as a partner of a JV/Consortium. A bidder who submits or participates in, more than one bid will cause all of the proposals in which the bidder has participated to be disqualified. No bidder can be a subcontractor while submitting a bid individually or as a partner of a JV/Consortium in the same bidding process. A bidder, if acting in the capacity of subcontractor in any bid, may participate in more than one bid, but only in that capacity.

- iii. Conflict of Interest:
- (1) A conflict of interest for procuring entity or its personnel and bidders is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations.
- (2) The situations in which a procuring entity or its personnel may be considered to be in conflict of interest includes, but not limited to, following:-
- (a) A conflict of interest occurs when procuring entity's personnel's private interests, such as outside professional or other relationships or personal financial assets, interfere or appear to interfere with the proper performance of its professional functions or obligations as a procurement official.
- (b) Within the procurement environment, a conflict of interest may arise in connection with such private interests as personal investments and assets, political or other outside activities and affiliations while in the service of the procuring entity, employment after retirement from the procuring entity's service or the receipt of a gift that may place the procuring entity's personnel in a position of obligation.
- (c) A conflict of interest also includes the use of procuring entity's assets, including human, financial and material assets, or the use of procuring entity's office or knowledge gained from official functions for private gain or to prejudice the position of someone procuring entity's personnel does not favour.
- (d) A conflict of interest may also arise in situations where procuring entity's personnel is seen to benefit, directly or indirectly, or allow a third party, including family, friends or someone they favour, to benefit from procuring entity's personnel's actions or decisions.
- (3) A Bidder may be considered to be in conflict of interest with one or more parties in a bidding process if, including but not limited to:-
- (a) They have controlling partners in common;
- (b) They receives or have received any direct or indirect subsidy from any of them;

- (c) They have the same legal representative for purposes of the bid;
- (d) They have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another;
- (e) A bidder participates in more than one bid in the same bidding process. However, this does not limit the inclusion of the same sub-contractor, not otherwise participating as a bidder, in more than one bid; or
- (f) A bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the subject matter of procurement of the bidding process. All bidders shall provide in Qualification Criteria and Biding Forms, a statement that the bidder is neither associated nor has been associated directly or indirectly, with the consultant or any other entity that has prepared the design, specifications and other documents for the subject matter of procurement or being proposed as Project Manager for the contract.
- iv If the Bidder or any of the constituent JV/Consortium member(s) does not meet the criteria stated as per Clause 1.1 of NIB, including the constituent JV/Consortium member(s) shall be considered ineligible for participation in bid process and they shall be considered ineligible applicants.

v. LEAD PARTNER/ NON SUBSTANTIAL PARTNERS/ CHANGE IN JV/ CONSORTIUM

- a) In case of JV/Consortium of Indian contractor:
- i. Lead partner must be a substantial partner in the JV/Consortium i.e. having a minimum of 26% participation in the JV/Consortium. Each substantial partner in case of JV/Consortium shall have experience of executing at least one "similar work" of minimum 40% of NIB value in last 05 years.
- b) Each non-substantial partner should have a minimum of 20% participation in the JV/Consortium. 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. In the bid for similar/civil work, a joint venture/Consortium to qualify, each of its non-substantial partner must have experience of executing at least one similar work of minimum 20% of NIB value in last 10 years.
- c) In case of JV/Consortium, change in constitution or percentage participation shall not be permitted at any stage after their submission of application otherwise the applicant shall be treated as non-responsive.
- d) The bidder, in case of JV/Consortium, shall clearly and unambiguously define the role and responsibilities for each substantial/ non-substantial partner particularly with reference to financial, technical and other obligations in the JV agreement/MOU acceptable to the Employer, providing clearly that any abrogation/subsequent reassignment of any responsibility by any substantive/non-substantive partner of JV/Consortium in favour of other JV/Consortium (without written approval of Employer) from the one given in JV agreement/ MOU at bid stage, will be treated, as breach of contract conditions and/or 'concealment of facts' (as the case may be), vide GCC clause 4.33.1 [a (ii) and (iii)] and acted accordingly.

Note: - The MOU may stipulate mandatory information to be provided. However, bidder can include additional details/arrangements finalized between the members in

this MOU provided these additional details/arrangements should not be in contravention of Employer's interest as per terms and conditions of Contract. Bidder may further note that no separate MOU/JV agreement should be executed for the sake of working arrangement amongst the partners other than the MOU/JV agreement accepted by the employer. In case, it comes to the notice of JMRC either during or even after completion of Work that JV/ Consortium members have either altered / modified the MOU / JV agreement with respect to the MOU submitted at biding stage or entered a separate MOU/ agreement or made any other arrangement akin to a contract without the specific approval of Employer in writing, it shall be treated as a fraudulent practice under GCC clause 4.33.1 (a) (ii) of this bid for which every constituent of the JV/Consortia is liable to be debarred for a period up to three years along with such other legal actions as may be permissible under the law.

The Employer in such cases, may in its discretion take action under clause4.33.1 (b) and / or under clause 4.33.1 (c) of GCC against any member(s) for failure in bidder's obligation and declare that member(s) of JV/Consortium ineligible for award of any bid in JMRC 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.

- (vi) A bidder debarred under section 46 of Rajasthan Transparency in Public Procurement Act, 2012 shall not be eligible to participate in any procurement process undertaken by JMRC,-
 - (a) any procuring entity, if debarred by the State Government; and
 - (b) a procuring entity if debarred by JMRC or any other Metro Organization.

General Manager (Project Coordination) Jaipur Metro Rail Corporation Limited, Jaipur

SCOPE OF WORK

2.1 GENERAL

The work mainly comprises of Geo-Technical Investigation Work from Badi Chouper to Transport Nagar (2.85Km) Phase 1C and Mansarovar to Ajmer Road (Chauraha) (1.35 km) Phase -D" of JAIPUR METRO RAIL CORPORATION at Jaipur.

Site Familiarization Certificate: The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the site of works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for execution of the works. The costs of visiting the site shall be at the Bidder's own expense. The bidders should visit the work site, acquaint themselves with site conditions, approach roads, availability of materials, lead of materials, etc.

The contractor is required to execute the work in stretches/areas as per alignment plan given in tender documents. Contractor shall have no claim if the stretches/area is not available for execution due to traffic constraints etc., Also no extra time shall be permitted on this account.

2.2 BRIEF SCOPE:-

The above work shall cover the following:

- a) The contractor shall submit Programmes and Progress Reports of works as per Clause-4.13 and Clause - 4.14 of General Conditions of Contract (GCC) available on JMRC's website for bidder's reference. The GCC Document shall also be a part of bid document and contract for this work.
- **b)** Provision of all necessary labours, construction equipment, instruments and appliances in connection with all above mentioned work as specified or as directed by Employer/Engineer.
- c) Conducting Standard Penetration Tests in bore holes at regular intervals of 1.5m as per I.S. Code of practice and also in-situ tests as per Schedule.
- d) Deleted.
- e) CONTRACTOR TO KEEP SITE CLEAR:- Clearing site after completion of work and handing over of all the works, as specified and directed by Engineer-In-Charge. During the progress of Works, the Contractor shall keep the Site free from obstructions and shall store neatly any construction plant and surplus materials and clear away and remove from site any rubbish or temporary works no longer required. On completion of the works, the Contractor shall clear away and remove from site all constructional plant, surplus material and temporary works. He should leave the whole of the site and Works in a clean, tidy and workman like condition to the satisfaction of the Engineer. Bentonite slurry, mud, water shall not be allowed to spill on to the pavements.

Packing of the boreholes with suitable concrete works etc as per the Directions of Engineer-In-Charge for making the work site safe for public must be ensured by the Contractor before leaving the work site. No extra cost shall be payable for such works.

- **f)** Damage caused to the properties, if any, during execution of above work shall be rectified by the bidder at his cost failing which the cost of rectification shall be recovered at market cost of such items from any R/A Bill / Final Bill of the bidder.
- **g)** The work shall be carried out as and when required by Engineer/Employer. with all safety precautions. The bidder shall ensure all his workers shall have Personal Protective Equipment's (PPE's) at his own cost and ensure safety of site by providing Barricades (if required) for restricting movement of public to work area. The barricade arrangement (if required) shall be approved by Engineer-In-Charge keeping in view the overall circulating pattern of the commuters at the work site
- h) Time Period is forty five days from the stipulated date of commencement/LOA of work as per clause 1.0 (c.) of NIB.
- i) Deleted.

- j) Deleted.
- k) Deleted.
- I) Deleted.
- m) Deleted.
- n) Ancillary Building near Station Building:- The required investigations and testing at the location shall be covered under the scope of work of contractor as per the directions of Engineer-In-Charge if required.
- **o)** Required testing, sampling and submission of report for the existing wells (If any) located near/along the alignment shall be covered under the scope of work.

2.3 MATERIALS, CODES AND STANDARDS:-

Quality

All materials used in the works shall be of the best quality of their respective kinds as specified herein, obtained from sources and suppliers approved by the Engineer and shall comply strictly with the tests prescribed in the Technical Specifications / Code of Practice (RPWD/CPWD/IRC/IS Codes etc) as per the directions of Engineer-In-Charge. Drilling of boreholes sampling and other investigations are required to be carried out in accordance with specifications of relevant codes of Bureau of Indian Standards as given below:

IS:1080 Code of practice for design and construction of simple spread foundations

- IS:1498 Classification and identification of soils for general engineering purposes
- IS:1892 Code of practice for subsurface Investigation for foundation.

IS:1904 Code of practice for design and construction of foundations in soils: General requirements.

IS:2131 Method of standard penetration test for soils

IS:2132 Code of practice for thin walled tube sampling of soils

IS:2720 Method of test for soils (Relevant parts)

IS:2809 Glossary of terms relating to soil dynamics

IS:2911 Code of practice for design and construction of pile foundations (Relevant parts)

IS:2950 Code of practice for design and construction of raft foundation (Part-I)

IS:4078 Code of practice for indexing and storage of drill cores

IS:8009 Code of practice for calculation of settlement of foundation (Part-I&II)

IS:8763 Guide for undisturbed sampling of sand

IS:8764 Method for determination of point load strength index of rocks

IS:9143 Method for determination of unconfined compressive strength of rock materials.

IS:9179 Method for preparation of rock specimen for laboratory testing.

IS:9640 Specifications for split spoon sampler

IS:4453 Code of practice for exploration by pits, trenches, drifts and shafts

IS:4464 Code of practice for presentation of drilling information and core description in foundation investigation

IS:5249 Method of test for determination of in-situ dynamic properties of soil

IS:5313 Guide for core drilling observations

IS:6403 Code of practice for determination of allowable bearing pressure shallow foundation

IS:6935 Method of determination of water level in a bore hole

IS:11229 Specifications for shear box testing of soils

IS:12070 Code of practice for design and construction of shallow foundations on rocks

- IS:2720 Part-IV Grain size Distribution
- IS:2720 Part-V Atterberg Limits

IS:2720 Part Natural Moisture Content

IS:2720 Part-II Natural Dry Density

IS:2720 Part-XI Shear Parameters

IS:2720 Part-XV Consolidation Characteristics.

IS:4078 Code of practice for indexing & storage of drill cores.

IS:2131 Method for standard penetration test.

IS:1892 Code of practice for sub surface investigation for foundations

IS:6926 Diamond core drilling site investigation for river valley projects

IS:5313 Guide for core drilling observation.

- IS:4464 Code of practice for presentation of drilling information and core description in foundation investigation.
- IS: 5529 (Part-I & Part-II) Code of practice for in-situ permeability tests in overburdened rock respectively.

BIS: 6926 Diamond core drilling site investigation for river valley projects.

BIS: 2113 for Rock drilling.

2.3.1 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 bidder at its own cost within 15 days

Any work not to the satisfaction of the engineer or his representative will be rejected and same shall be rectified, or removed and replaced with work of required standard of workmanship at no extra cost.

2.4 TIME SCHEDULE:

The contract period for execution of the above mentioned work is **forty five days** from date of commencement/LOA of work.

2.5 VARIATION INQUANTITIES

Quantities provided in BOQ are tentative, variation shall be considered in accordance to clause 12 of GCC and as per latest provisions of Rule-73 of RTPPR-2013 with prior approval of Employer.

2.6 CONTRACTOR'S PROJECT ORGANIZATION.

The Contractor shall have a competent team of Managers, Geologist, Geotechnical Engineers, Technical staff and Safety officer etc so as to complete the work satisfactory as per various requirements of the contract.

PROVISION OF EFFICIENT AND COMPETENT STAFF:- The Contractor shall employ and keep on the works at all times efficient and competent staff to give necessary directives to his workers to see that they execute works in a safe and proper manner. He will provide the details of such staff comprising names, qualification, experience etc. The Contractor shall employ only such supervisors and workmen as are capable, careful, and skilled in their trade and calling. The Engineer shall be at liberty to object to and require the Contractor to remove forthwith from the works, any person employed by the Contractor in or for the execution of works or maintenance of works, who, in the opinion of the Engineer, misconducts himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by the Engineer to be undesirable and such person shall not be employed again in the works without the written permission of the Engineer. Any person so removed from the works shall be replaced by a competent substitute immediately.

WORKS DURING NIGHT:- Unless specifically provided in the Special Conditions of Contract, the Contractor shall carry out all works including during night subjected to restriction imposed by local authorities/police. Contractor shall make his own arrangement for sufficient illumination at site. Nothing extra will be paid for doing works at night.

2.7 TECHNICAL SPECIFICATIONS:-

2.7.1 RPWD Specifications/CPWD Specifications/IRC/IS Code etc and provisions of Codes/Specifications/ Manual are applicable for these works and work should be carried out as per these specifications and manual and other particular technical specifications given in the bid documents. Crane or Hydra if required to be used for various works at height in JMRC premises shall be of 1st Generation or equivalent category as per the directions of Engineer-In-Charge

SNo	Description	Frequency
1	Under Ground Section	@100M Staggered
2	Elevated Section	@200M
3	Under Ground Station	4 Nos.
4	Elevated station	2nos.

2.7.2 The frequency of work to be carried out as under:-

- **2.7.3** Drilling of 150mm diameter bore holes upto maximum depth of 40 meters in soil (upto N=100) and minimum 4 meter below the proposed rail levels for rocky strata using hydraulic / calyx rig by wash boring method as per the directions of Engineer-in-charge and as detailed in Technical Specifications and Schedule.
- **2.7.4** Conducting Standard Penetration Tests in bore holes at regular intervals of 1.5m as per I.S. Code of practice and also in-situ tests as per Schedule.
- **2.7.5** Collecting undisturbed soil samples (minimum of two per bore hole) from every bore hole as per I.S. Code of practice.
- **2.7.6** Recording of water table level in the bore holes after completion of boring.
- **2.7.7** Drilling bore holes up to a maximum depth of 5 meters in intact Hard Rock (RQD >50%) or 10 m in weathered rock (RQD up to 50%) or 40 meters in soil (up to N=100) using hydraulic / calyx rig by wash boring method as per the directions of Engineer-in-charge and as detailed in Technical Specifications and Schedule.
- **2.7.8** Conducting in-situ permeability tests in Rocky strata and tests in labs in all other types of soils.
- **2.7.9** Collecting rock core samples from bore holes and record the RQD.
- **2.7.10** Conduct all necessary laboratory tests on samples collected as per Schedule and Technical Specifications.
- **2.7.11** Survey of bore holes for elevation and plotting of bore hole locations in alignment plan.

2.7.12 Preparation of report summarizing the details of soil / rock classifications, analysis of test data and recommending the type of foundations to be adopted with design calculations for the proposed Elevated corridor duly highlighting the design criteria and design methodology and different groups of soil strata encountered.

2.7.13 Soil investigation (boreholes)

Boreholes shall be sunk at specified locations to obtain information about the suba) surface soil, and to collect soil and rock samples for strata identification and laboratory testing. The minimum diameter of borehole shall be 150 mm in soil and NX size(75 mm dia.) in rock and the boring shall be carried out in accordance with the provisions of IS 1892 and as per specification. Bore holes shall be advanced using water or bentonite. No slush should be allowed to flow on the road. If any slush is there, the same should be cleaned during and after completion of boring. Casing may be necessary to maintain the sides of the boreholes in a stable condition. Rock boring shall be carried out using a double core barrel / triple tube having a diamond bit to get higher core recovery. Necessary barricading with 2.4mx1.8m metallic/wooden boards with necessary fixing / supporting arrangements shall be made around the work area. The barricades shall be provided with wheels for easy shifting and movement. The barricading panels shall be light/movable and shall be as per Sketch No. 1 of JMRC enclosed. The cost of providing, maintaining, shifting etc. of barricading shall be borne by the agency.

All boreholes shall be extend upto depths of 40 m in soil (upto N>=100) or 10 m in weathered rock (RQD <=50%) or 5 m in hard rock (RQD>50%) unless otherwise directed by the Engineer. However the maximum depth of bore hole does not exceed40m. If strata having a standard Penetration Test value greater than 100 with characteristics of rock, is met with earlier, the borehole shall be advanced further by boring with approval of the Engineer. When the boreholes are to be terminated in soil strata, the Standard Penetration Test shall be carried out at the termination depth and recorded.

Packing of the boreholes with suitable concrete works etc as per the Directions of Engineer-In-Charge for making the work site safe for public must be ensured by the Contractor before leaving the work site. No extra cost shall be payable for such works.

- **b)** Casing shall be used in the boreholes to support its sides, if required. When casing is used it shall be ensured that its bottom end is, at all times, less than 150 mm above the bottom of the borehole. In case of cohesion less soil, the advancement of the casing shall be such that it does not disturb the soil to be tested or sampled. The casing shall be advanced by slowly turning the casing pipe and not by driving. Casing can be withdrawn after inspection of bore hole by the Engineer with his approval. No extra payment shall be made for providing the casing.
- c) In-situ tests shall be conducted and undisturbed samples shall be obtained at specified intervals in the boreholes. Representative disturbed samples shall be preserved for conducting various identification tests in the laboratory. Water level shall be determined in the boreholes and shall be carefully recorded on the drilling log.
- d) The borehole shall be cleaned, using suitable tools up to the depth of testing or sampling, ensuring that there is minimum disturbance of the soil at the bottom of the borehole. The process of letting through an open tube sample shall not be permitted. In cohesive soils, the borehole may be cleaned by using a bailer with a check valve.

2.7.14 Rotary drilling

Rotary method can be used in all types of soil below water table. In this method, boring shall be done by rotating the bit fixed at the bottom of the drill rod. Proper care shall be taken to maintain contact between the bit and the bottom of the borehole at all times. Use of percussion tool shall be permitted in hard clays and dense sandy deposits.

2.7.15 Water level measurement

The water level in the borehole shall be carefully recorded and reported, when first encountered whilst drilling the water level shall be measured every morning before recommencement of the drilling activities.

2.8 IN-SITUTESTS

2.8.1 Standard Penetration Tests:

SPT tests shall be conducted in all types of deposits at 1.5m intervals or as per direction of engineer in charge. The tests shall be carried out by driving a standard split spoon by means of 63.5kg hammer (140 lbs) having a free fall of 76 cms (30 inches). Detailed procedure for testing as specified in IS 2131 shall be followed. The samples obtained in this split spoon shall be placed in an airtight jar or equivalent, levelled and preserved for identification tests in the laboratory.

2.8.2 Water samples

- a) Samples of ground water shall be obtained from each bore hole when first encountered or unless specified otherwise.
- b) At the specified depth, water shall be pumped out so that fresh ground water flows into the borehole. Care shall be taken in avoiding any contamination with surface water at any time. Water samples shall be collected in 5 litre polythene or glass container and labelled properly.

2.8.3 Field Permeability Tests:

Field Permeability Tests shall be conducted, if required to determine the water percolation capacity of overburden soil. The specifications of the equipment required for the tests and the procedure of testing shall be in accordance with IS 5529 Part-1.

a) Constant Head Method

This test shall be conducted in boreholes where soils have high permeability. Water shall be allowed into the borehole through metering system ensuring gravity flow constant head so as to maintain a steady water level in the borehole and reference mark shall be done at a convenient level, which can be easily seen in the casing pipe to note down the fluctuations of water level. The fluctuations shall be counteracted by varying the quantity of water flowing into the borehole. The evaluation of water shall be observed at every 5 minute interval. When 3 consecutive readings show constant value, the necessary observations such as flow rate, evaluation of water surface above test depth, diameter of casing pipe etc. shall be made and recorded as per the proforma recommended in IS : 5529 Part-1Appendix-A.

b) Falling Head Method

This method shall be adopted for soils of low permeability and which can stand without casing. The test section shall be sealed at the bottom of borehole and a packer at the top of the test section. If the test has to be conducted at an intermediate section of a borehole, then double packers shall be used. Access to the test section through the packers shall be by means of a pipe, which shall extend to above the ground level. Water shall be filled in the pipe up to the level marked just below the top of the pipe and water allowed to drain into the test section. The water level in the pipe shall be recorded at regular intervals as mentioned in IS: 5529 Part-1 appendix-B. The test shall be repeated till constant records of water level are achieved.

2.8.4 Resistivity Tests:

The electrical resistivity shall be conducted to determine the subsurface resistivity by making measurements on the ground surface. The measurement of electrical resistivity shall be conducted using four electrodes placed in contact with the surface material. The geometry, separation of the electrode array and spacing are to be selected on the basis of the application and required depth of investigation. The specifications of the equipment required for the tests, the procedure of testing and electrode array geometry shall be in accordance with IS 15736.

2.8.5 Plate Load Tests:

The deformation modulus (Ev2) shall be conducted to check the suitability of various components of the Formation layer (blanket, sub grade) and of subsoil for laying tracks. The test shall be done as per RDSO Specification No. RDSO/2020/GE: IRS-0004 & DIN 18134 – April 2012.

2.8.6 Seismic Refraction Test:

- A. Conducting Seismic Refraction Test on site including mobilization, site preparation and carrying out the tests.
- B. Analysis of SRT data and submission of interpretative test report in 3 copies, along with correlation with the existing borehole data.

2.9 SAMPLING AND TESTING

2.9.1 General

- 1. The bidder 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 at his own cost. All soil & rock testing shall be conducted by bidder at his own cost in a valid NABL approved lab having accreditation under ISO 17025:2017.The testing charges shall be borne by bidder.
- 2. Samples provided to the Engineer are to be labelled in boxes suitable for storage. Materials or workmanship, not corresponding in character and quality with approved samples, will be rejected by the Engineer.
- **3.** Samples required for approval and testing must be intimated to Employer/Engineer at least **2 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.
- 4. Sufficient number of soil samples shall be collected. Disturbed soil samples shall be collected for field identification and conducting tests such as sieve analysis, Index properties, i.e. Plastic & Liquid limits, chemical analysis etc. Undisturbed samples shall be collected to estimate moisture content, density, the physical strength and settlement properties of the soil.
- **5.** All accessories required for sampling and the methods of sampling shall conform to IS 2132 and IS1892.
- **6.** All disturbed and undisturbed samples shall be collected at site as per IS: 1498/1970.
- 7. All samples shall be identified with date, borehole number, depth of sample etc. The tube samples shall be properly trimmed at the ends, waxed and suitably capped. Soil samples shall be transported to the laboratory at the end of each working day with proper protection against loss and damage.

2.9.2 Disturbed Soil Samples

Disturbed soil samples shall be collected in boreholes at regular intervals. Samples, weighing approximately 1 kg shall be collected in boreholes at 1.5m intervals starting from a depth of 0.5m below ground level and at every identifiable change of strata to supplement the boring records. Samples shall be immediately stored in air-tight containers or equivalent and which shall be filled to capacity as much as possible.

2.9.3 Undisturbed Soil Samples

In each borehole, undisturbed soil samples shall be collected at every change of strata subject to a minimum of two as follows. Undisturbed samples shall be of 100m dia and 450 mm length. Samples shall be collected in such a manner that the structure of the soil and the moisture content do not get altered. The specifications for the accessories required for sampling and the sampling procedure shall conform to IS: 1892 and IS: 2132. The undisturbed sample shall be immediately followed by SPT test, after the borehole has been cleaned.

2.9.4 Undisturbed sampling in cohesive soil

- a) Undisturbed samples in soft to stiff cohesive soils shall be obtained using a thinwalled sampler. In order to reduce the wall friction, suitable precautions, such as oiling the surfaces, shall be taken.
- b) Undisturbed samples in very loose saturated sandy and silty soils and very soft clays shall be obtained by using a piston sampler, consisting of a sampling cylinder and piston system. In soft clays and silty clays, with water standing in casing pipe, piston sampler shall be used to collect undisturbed samples. During this method of sampling, expert supervision is called for.

Accurate measurements of the depth of sampling, height of sampler, stroke and length of sample recovered shall be recorded on the field log. After the sampler is pushed to the required depth, both the sampler cylinder and piston system shall be drawn up together, ensuring that there shall not be any disturbance to the sample which shall then be protected from changes in moisture content. The ends of the tubes will be waxed and provided with caps. All samples must be transported to the laboratory at the end of each working day. The tubes shall be clearly marked to indicate the type of the sample.

2.9.5 Chemical Tests

Chemical test shall be conducted on soils and water samples as per relevant BIS (latest revisions) to report the following:

- a) pH
- b) Chlorides in ppm & percentage
- c) Sulphates in ppm and percentage and expressed as SO3 & SO4.

2.10 PRESENTATION OF DRILLING INFORMATION AND CORE DESCRIPTION

- a) Daily drilling reports confirming to Appendix –A, IS: 4464 shall be prepared and submitted to the Engineer.
- b) Within 24 hours of completion of each borehole a field borehole log shall be prepared by a competent engineering geologist or geotechnical engineer. The log will include descriptions of the materials encountered and shall include the observations made during drilling including the samples obtained along with the depth, SPT, N-value and relevant information. The Engineer will comment on

the log and provide comments to be incorporated for the final report. This shall conform to Appendix-B of IS: 4464 and shall be submitted in triplicate to the Engineer-in-charge. The Contractor must seek the approval of the Engineer for the bore hole log format.

c) On completion of all drilling and test, a factual report shall be prepared (see clause 3.10).

2.11 ROCKINVESTIGATION

2.11.1 Drilling

Rotary core drilling shall be adopted by open holing through soft materials, or by drilling ahead in soft ground boring which has already been made. The substrata to be cored, may be soft, or may contain mixture of hard rock and soft weathered rocks. The drilling equipment used shall have an adequate capacity so as to ensure that required depths are reached and good quality rock core is recovered. The drilling equipment shall be hydraulically operated. The equipment, method and the procedure for drilling shall conform to IS: 1892.

Drilling shall be carried out using NX / EX size diamond tipped drill bits, a double core barrel with core catchers shall be used to ensure continuous and good core recovery. Core barrels and core catchers shall be used for breaking off the core and retaining it when the rods are withdrawn, double tube core barrels shall only be permitted. Water shall be circulated continuously down the hollow rods and the washings at the surface shall be collected. A very high recovery ratio shall be aimed at in order to get a satisfactory undisturbed sample. Core of 1.5m length shall be aimed at. If the Engineer determines that poor core recovery is due to the inability of the drilling crew a new borehole will be drilled at no cost to the client.

- **A.** No drilling run shall exceed 1.5 m in length. If the core recovery is less than 80 % in any run, the Engineer shall be informed and the length of the subsequent run shall be reduced to 0.75 m.
- **B.** Prior to commencement of the drilling operations, the rig shall be properly weighted down, or anchored, so as to minimize vibrations and ensure maximum core recovery.
- **C.** Full observations in respect of the colours and nature of the return drill water, water loss and permeability, speed of drilling, core loss and other relevant details, shall be described as per relevant IS codes.
 - a) The colour of return water at regular intervals, the depth at which any change of colour of return water is observed, the depth of occurrence and amount of flow of hot water, if encountered, shall be recorded.
 - **b)** The depth through which a uniform rate of penetration was maintained, the depth at which marked change in rate of penetration of sudden fall of drill rod occurs, the depth at which any blockage of drill bit causing core loss, if any, shall be recorded.
 - **c)** Any heavy vibration or torque noticed during drilling should be recorded together with the depth of occurrence.
 - d) Special conditions, like the depth at which grouting was done during drilling, presence of artesian conditions, loss of drilling fluid, observations of gas discharge with return water etc., shall also be observed and reported.

2.12 EXTRACTION AND STORING OF CORESAMPLES

- A. Core samples shall be extracted by the application of a continuous pressure at one end of the core with the barrel held horizontally without vibration. Friable cores shall be extracted from the barrel directly into a suitable sized half round plastic channel section. Core shall be taken to maintain the direction of extrusion of sample same as while coring.
- **B.** Immediately after withdrawal from the core barrel, the cores shall be placed in a tray and transferred to boxes specially prepared for the purpose. The boxes with a sturdy cover shall be made from seasoned timber or any other suitable material and shall be indexed on top of the lid as per IS: 4078. The cores shall be numbered serially and arranged in the boxes in a sequential order. The description of the core samples shall be recorded as per IS: 4464 when core is recovered, it shall be recorded as specified in the standard and the engineer should be informed so that remedial measures can be implemented. Continuous record of core recovery and RQD to be mentioned in the log as per IS: 11315, Part-II. All core boxes shall be transported and handed over to the Engineer on completion of each bore hole. All core boxes shall be photographed and the photos attached to the report. The photographs shall show the rock core box clearly labelled indicating project name, borehole number, and depth stored in the core box and the serial number of the box for the bore hole (e.g. box 2 ofn).

2.13 LABORATORYTESTING

- **2.13.1** At the completion of the borehole the field log should be transmitted to the engineer within 24 hours. The engineer will assign a laboratory test programme for the samples of that borehole within 3 working days after receipt of the field log.
- **2.13.2** These boreholes are to be conducted for confirmation of data available and for finding out the depth of rock profile at certain locations. As such the testing of samples has to be carried out in a meticulous manner. Availability of testing facilities as directed is a must and a visit to the laboratory may be made by a representative of JMRCJMRC LTD. before accepting any offer submitted by any BIDDER.
- **2.13.3** The Engineer may visit to observe tests of soil as well as rock in the laboratory.
- **2.13.4** Necessary laboratory tests shall be conducted on selected samples in consultation with the Engineer-in-charge. For this purpose, all undisturbed samples shall be entered on the proforma shown in relevant IS Codes and submitted, in triplicate, to the Engineer with records of the field bore logs.
- **2.13.5** All tests shall be performed as per IS: 2720 and as per the directions of the Engineer-in-Charge as directed.

2.13.6 Testing of Rock Samples

Selected core samples shall be tested in the laboratory for hardness / crushing and shear strength, test samples shall be chosen so as to include joints, fissures etc. as far as possible

2.13.7 Point Load Test on rock Cores

Intact samples of minimum 50 mm diameter and length equal to 1.5 times the diameter should be tested on a Point Load Tester and its point load index shall be determined. The Uniaxial Compressive Strength (UCS) of the sample should be calculated from the point load index. The index as well as the UGS should be reported.

Uniaxial Compressive Strength of Intact Rock Samples Intact rock cores of minimum NX/EX size and length 2.5 to 3 times the diameter should be tested for its uniaxial compressive strength. This test should be conducted on perfectly cylindrical samples, which shall be polished and conform to Indian Standard Code of practice. The UCS of the sample should be reported along with the diameter and length of the sample.

2.13.8 Laboratory Tests

Tests as indicated in the specification and as called for by the Engineer, shall be conducted as per the Schedule of Quantity.

Direct shear and triaxial tests shall both be conducted at same depth for same material obtained from one sampler at least at two locations in each bore hole to find out the values of cohesion and the angle of shearing resistance. The tests shall be carried out, for all conditions and their specific engineering significance should be maintained. However, conditions of test i.e., unconsolidated undrained, consolidated drained etc. shall be as per specific instructions from Engineer.

Type and location of other tests shall be decided by the Engineer. It shall be the duty of the contractor to obtain details of locations and type of tests from the Engineer before starting boring for a particular bore hole. The Engineer shall however, be free to change these locations if so warranted by site conditions.

The analysis of above data shall include calculations for self standing height, dewatering requirements including capacity of pumps and number of pumps and shall be included in report in detail.

All soil testing as directed by Engineer shall be conducted by Laboratory holding current accreditation under Inter-national Standard Organisation / Bureau of Indian Standards.

2.14 REPORT

- **2.14.1** On completion of field and laboratory work, for every km, a draft factual report in triplicate, shall be submitted incorporating the following:
 - a) A complete description of the soils and rocks encountered, along with in-situ test results and the samples type and depths.
 - b) Procedure of investigation employed.
 - c) Detailed bore hole logs, laboratory and field test results, both in tabular as well as in graphical form, and a plot plan showing locations and reduced levels of bore holes and other tests.
 - d) Soil classification curves including Table indicating D-10, D-30, D-60 size, uniformity coefficient etc. These figures should be made on Auto Cad and submitted to JMRC LTD. on CDs/DVDs
 - e) Mohr's circle diagrams drawn on the basis of data obtained from shear strength tests shall be enclosed.
 - f) Aggressiveness of soil and soil water to concrete, steel and other building material.
 - g) Any other information of special significance encountered during investigations and likely to have a bearing on design and construction.
 - h) Reduced levels and coordinates of bore holes shall be tabulated. The depth of water table with respect to ground shall also be given.

- i) Detailed report giving recommendations for type of foundation, analysis of bore logs & tests results along with SBC values.
- 2.14.2 Final report shall be submitted only after incorporation of comments by the Engineer.
- **2.14.3** Four copies of report for every km including all figures shall be given to JMRC LTD. Computer diskettes /CDs for this report and figures shall be submitted by contractor to JMRC LTD. Any data supplied by JMRC LTD. shall not be used for any other purpose other than it is meant for.
- **2.14.4** The data, reports and figures generated out of this assignment shall be the sole property and the contractor shall give an undertaking that he shall not use this for any other purpose. No computer back-ups shall be kept by him.
- **2.14.5** All the locations of bore hole points shall be marked on drawing and give horizontal, Coordinates and reduced levels. The Reduced Levels of the top of Bore holes shall be interlinked with the GTS Bench Marks in Co-ordination with the Agency doing the detailed topographical Survey.



Words/Text to be replaced with:-

- (i) "DMRC" with "JMRC".
- (ii) "Delhi metro Rail Corporation" with "Jaipur Metro Rail Corporation"
- (iii) Logo of JMRC is to be incorporated on the visible face of barricade panel.

JAIPUR METRO RAIL CORPORATION LIMITED, JAIPUR SCHEDULE AND SPECIFICATIONS

3.0 CONTENTS OF BID DOCUMENT:-

Documents as listed below (Except SN-3.7; Schedule-G, Price Bid) are to be attached separately with Notice Inviting Bid (NIB) in dully filled, stamped and signed form as applicable to the bidder with the First Part of Online Bid i.e. Technical Bid.

3.1 SCHEDULE -A:- NIB & SCOPE OF WORK:

The bidder should see the site and fully understand the conditions of the work site before bidding and include all lead, lifts etc. for the material in his item rate/ percentage to be quoted on the rates as given in the SCHEDULE –G/Price Bid/Second Part: Financial Bid. Then work shall be carried out to the entire satisfaction of the Engineer- In- Charge of the work. The brief scope of work is given in Clause-2.0 of NIB Document.

- **3.2 SCHEDULE-B:-** INSTRUCTIONS TO BIDERS:- Attached Separately.
- 3.3 SCHEDULE-C- SPECIAL CONDITIONS OF CONTRACT:-Attached Separately.
- 3.4 SCHEDULE -D:- GENERAL CONDITIONS OF CONTRACT & SAFETY HEALTH AND ENVIRONMENT (SHE) MANUAL: Approved GCC & SHE MANUAL is uploaded and available on the JMRC website, by signing the Bid Document, firm agrees to accept the GCC & SHE MANUAL. While framing the contract with the successful Bidder, the bidder shall sign the complete GCC & SHE MANUAL document and submit it to the JMRC.
- 3.5 SCHEDULE-E:- ANNEXURE:
 - (i) <u>Annexure A1: Compliance with the code of Integrity and No Conflict of Interest.</u>
 - (ii) Annexure B1: Declaration by the Bidder regarding Qualifications.
 - (iii) <u>Annexure C1: Grievance Redressal during Procurement Process.</u>
 - (iv) Annexure D: Additional Conditions of Contract.
 - (v) <u>Annexure E: Initial filter criteria of applicant.</u>
 - (vi) Annexure F: Certificate by the Bidder to be appended with Annexure-E.
 - (vii) Annexure G:- Undertaking by bidder regarding registration for EPF, ESIC and Contract Labour License etc. as per Clause-1.0 (r) Note (b) of NIB.
 - (viii) <u>Annexure X:- Certificate By Bidder with each Bill.</u>

3.6 SCHEDULE-F:-FORMS:-

- (i) FORM-A:- Form of Bid with Appendix.
- (ii) FORM-B:- Performa for Statement of Deviations.
- (iii) FORM-C:- Form of Performance Security (Form of Bank Guarantee) by Bank.
- (iv) FORM-D:- Form of Agreement.
- (v) FORM-E:- General Information.
- (vi) FORM -F:- Bank Details.
- (vii) FORM-G:- Power of Attorney.
- (viii) FORM-H:-Indemnity certificate and obligation/ Compliance to be ensured by the Bidder.
- (ix) FORM-I:- Obligations/Compliances to be ensured by Bidder.
- 3.7 <u>SCHEDULE-G:-PRICE BID/FINANCIAL BID (SECOND PART):-</u> Attached separately (Non Scheduled Items)
- **3.8 SCHEDULE-H**:- Check list for bid Evaluation/Submission.

SIGNATURE OF CONTRACTOR

General Manager (Project Coordination)

With full address & Mobile No.:

Jaipur Metro Rail Corporation Ltd., Jaipur

Signature of Agency (Authorized Signatory)