



Tender No. MUM/EN/S/Works/659(R)/2024-25

For

Name of the Work “Construction of RCC Pipe bridges(17nos) of 1600mm inner Diameter at Scattered locations by Micro tunnelling Method below IR and DFC Embankment besides existing Minor Bridges parallel along with Diva-Vasai Section of Central Railway for JNPT-Vaitarana Section of DFCCIL.”

(PARTICIPATION THROUGH E-TENDER ONLY)

Visit:- www.ireps.gov.in/ its link at www.dfccil.com
(Help Desk of IREPS: 011-23761525)

E-TENDER DOCUMENT (TWO PACKET)

JUNE-2024

Employer:

**DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED
CGM-MUMBAI SOUTH UNIT
(A GOVERNMENT OF INDIA ENTERPRISE)
UNDER MINISTRY OF RAILWAYS**

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PART- I
Chapter I

NOTICE INVITING TENDER

PART- I
Chapter I
Section -1

NOTICE INVITING E TENDER

1.1. Tender For Works

Name of the work:

“Construction of RCC Pipe bridges(17nos) of 1600mm inner Diameter at Scattered locations by Micro tunnelling Method below IR and DFC Embankment besides existing Minor Bridges parallel along with Diva-Vasai Section of Central Railway for JNPT-Vaitarana Section of DFCCIL.”

- 1.1.1. Office of the Chief General Manager, Dedicated Freight Corridor Corporation of India Limited, 7th Floor, New Administrative Building, D. N. Road, Mumbai – 400001 invites tenders in prescribed forms from firms/ Companies/ Joint Ventures (If Applicable) having requisite experience and financial capacity for execution of the following work:

Tender No.	MUM/EN/S/Works/659(R)/2024-25
Name of Work	Construction of RCC Pipe bridges(17nos) of 1600mm inner Diameter at Scattered locations by Micro tunneling Method below IR and DFC Embankment besides existing Minor Bridges parallel along with Diva-Vasai Section of Central Railway for JNPT-Vaitarana Section of DFCCIL.
Employer	Chief General Manager, Mumbai (South), 7th floor, Central Railway, New Administrative Building, D.N. Road, Mumbai-400001
Type of Tender	Open-E-Tender
Type of Contract	Open E-Tender (Two Packet System)
Total Estimated Value	Rs. 45,23,67,389.55/- (Forty-Five Crore Twenty-Three Lakhs Sixty Seven Thousand Three Hundred Eighty-Nine and Fifty-Five Paise only) Including GST.
Period	18 Months (Eighteen Months)
Earnest Money Deposited (EMD)	Rs. 24,11,800/-(Twenty Four Lakh Eleven Thousand Eight Hundred Only) to be paid online through payment gateway provided at www.ireps.gov.in

Cost of Tender Document	Rs. 11,800/- (including GST)
Security Deposit	5% of contract value as per Preamble and General Instruction to Tenderers.
Tender processing fee	As per term & conditions of e-tendering website.
E-tendering website	www.ireps.gov.in For any help in connection with E-tendering & matter relating to Digital signature, please contact 'Help Desk available on left Navigation Block of homepage of the site https://www.ireps.gov.in and phone No. 011-23761525
Date of uploading of NIT & Bid documents (online publishing date)	As per IREPS
Pre Bid Conference	NA
Date of document download/Sale(Online)	As per IREPS
Issue of Corrigendum, if any	As per IREPS
Last date of submission of Tender	16/08/2024 upto 15:00 hour
Date & Time of Opening of Tender	16/08/2024 at 15:30 Hour
Validity of Offer	90 Days

1.1.2. Eligibility shall be assessed on applicants, fulfilling the technical capability and competence as well as for financial and organizational resources as specified in clause no. 1.3.13.1 A & B of Preamble and General instruction to tenders (Part-I, Chapter III).

1.1.3. The tender documents for this work can be downloaded from website www.ireps.gov.in, www.dfccil.com, and Central Procurement Portal, eprocure.gov.in. and offer of the same shall be uploaded only in the website www.ireps.gov.in. The tenderers shall carefully study the conditions given below and submit the offers accordingly, failing which the offers are liable to be not considered:

1.1.4. DFCCIL may issue amendment(s) [addendum(s) / corrigendum(s)] to the tender documents. In such cases the amendment(s) shall be issued and placed on DFCCIL's website: www.dfccil.com and www.ireps.gov.in at least (15 Days) Fifteen Days prior to opening of tender. The tenderers

who have downloaded the tender documents from the website before issue of amendment(s) must visit the website and ensure that such amendment(s) (if any) is also downloaded by them. Such amendment(s) (if any) shall also be uploaded duly stamped and signed / digitally signed along with the submission of tenders. Any tender submitted without amendment(s) (if any) shall be liable to be rejected.

- 1.1.5. The tender documents shall be submitted in online mode only through website www.ireps.gov.in in Two e-Packets only viz containing “TECHNICAL BID” and “FINANACIAL BID”. Detailed credential as per the requirement of eligibility criteria and all tender papers only in Two Packet.
- 1.1.6. Financial Bid (as specified in “Financial Bid” in Tender Document) duly filled along with Summary of Prices (Form No. 3) with % age above or below or at par on the amount of schedules "A, B and C" duly filled in along with Schedule of Prices (Form - 4) are to be uploaded. The rates must be filled after downloading the financial bid document in the prescribed format from the website www.ireps.gov.in. The financial bid should be downloaded & then filled up, saved and uploaded on the E-tendering website using digital signature for signing the document.
- 1.1.7. Any tender received without Earnest money or cost of tender documents in the form as specified in the tender documents shall not be considered and shall be summarily rejected.
- 1.1.8. Tenderers may note that they are liable to be disqualified at any time during tendering process in case any of the information furnished by them is not found to be true and action as per Tender conditions will be taken. The decision of DFCCIL in this regard shall be final and binding.
- 1.1.9. DFCCIL reserves the right to pre-qualify the bidder(s) provisionally based on the documents submitted by them and open financial bid(s), subject to their final verification. In the event of any document being found false, the provisional qualification shall stand withdrawn, and the next lower bidder shall automatically come to the position of such disqualified bidder. Action against such disqualified tenderers shall be taken as per above **Clause No. 1.1.8** of Notice Inviting Tender.
- 1.1.10. The cost of tender document (tender fee) as mentioned in the notice inviting tender on website www.ireps.gov.in, should be accepted through net banking on payment gateway. The cost of tender document shall not be clubbed with the earnest money deposit. The tenders unaccompanied with the requisite cost of tender documents in appropriate form shall not be considered or as per instruction given on website www.ireps.gov.in.
- 1.1.11. The tenders shall be filled up after careful study of the documents and the site and any clarification required may be obtained from the tender inviting authority.
- 1.1.12. The tenderers downloading the documents from internet must keep themselves updated through the website from which the tender document is downloaded regarding corrigenda, if any, to the notice inviting tender or the tender document, which shall be uploaded in the same website. The

offers received without such corrigenda published through website shall be liable to be rejected.

- 1.1.13.** Any willful changes/deletion/addition in printing carried out in the tender documents shall be viewed very seriously, whether detected at the time of opening/award of tender or after award of work and the same may result in penal action including banning of further business with the defaulting tenderers. In addition, the tenderers are liable to be prosecuted for the same as per law.
- 1.1.14.** E-Tenders shall be opened online at the time and given date as per NIT.
- 1.1.15.** The validity of offer shall be as mentioned in the NIT, from the date of opening of the Technical Bid of the tender.
- 1.1.16.** Transfer of the tender document purchased by intending tenderer to another tenderer is not admissible. Tenderer can submit tenders only on the documents purchased / downloaded from the website www.ireps.gov.in by them.
- 1.1.17.** Tenderers must read all instructions regarding e-tendering process as mentioned in PREAMBLE & GENERAL INSTRUCTIONS TO TENDERERS Part-I, Chapter-III.
- 1.1.18.** Tenderers are advised to visit the DFCCIL website/IREPS website regularly for information regarding tender Amendment(s) (if any) will be uploaded on DFCCIL website www.dfccil.com and www.ireps.gov.in only.
- 1.1.19.** Tenders shall be opened at the address given below as mentioned in Para 1.1.1 above in the presence of the tenderers or their authorized representatives intending to attend the opening. Address is Office of the Chief General Manager, Mumbai (South), 7th floor, Central Railway, New Administrative Building, D.N. Road, Mumbai-400001, India.

All the Bids received shall be opened on the date and time mentioned above in the tender notice. Bid of the bidders shall be opened through process of e-tendering.

Section -2

Instructions to Bidders (ITB)

1.2. Online Bidding Methodology: Online Bid System

Submission of Online Bids is mandatory for this Notice Inviting Tender. E-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Suppliers/Vendors will be the biggest beneficiaries of this new system of procurement. An e-tendering portal of Dedicated Freight Corridor Corporation of India (DFCCIL)/Indian Railway introduced for the process of e-tendering which can be accessed on <http://www.ireps.gov.in>. (Refer in the BID DOCUMENTS). Words in capital and not defined in this document shall have the same meaning as in “BID DOCUMENTS”. Benefits to Suppliers/service providers are outlined on the Home-page of the portal

1.2.1. Broad outline of activities from Bidders perspective: -

- a. To participate in the E-Bid submission, it is mandatory for the bidders to have user ID & password from www.ireps.gov.in.
 - b. Procure a Digital Signing Certificate (DSC)
 - c. Register on Electronic Tendering System (ETS)
 - d. Create Users and assign roles on ETS
 - e. View Notice Inviting Tender (NIT) on (ETS)
 - f. Download Official copy of Tender Documents from ETS.
 - g. Clarification to Tender Documents on ETS - Query to DFCCIL (Optional) - view response to queries posted by DFCCIL through addenda.
 - h. Bid Submission on ETS: Prepare & arrange all documents/paper for submission of bid online and tender fees deposit through E-Payment gateway.
 - i. Attend Public Online Tender Opening Event (TOE) on ETS.
 - j. Post TOE clarification on ETS (Optional). Respond to DFCCIL’s post - TOE queries.
- For participating in this tender online, the following instructions are to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the ETS.

1.2.2. Digital Certificate:

For integrity of data and its authenticity/ non repudiation of electronic records and to be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC) also referred to as Digital Signature Certificate (DSC) of class III issued by a Certifying Authority (CA) licensed by Controller of Certifying Authority (CCA) (refer <http://www.cca.gov.in>).

1.2.3. Registration:

The Tender documents can be downloaded from the website: <https://www.ireps.gov.in> and to be submitted in the e - format. Cost of the Tender Documents and EMD have to be submitted only through online payment modes available on IREPS portal like net banking, debit card, credit card etc. Manual payments through Demand draft, Banker's cheque, Deposit receipts, FDR etc. are not allowed. Payments against this tender towards tender document cost and earnest money are to be deposited /submitted before the schedule date & time of submission of the tender otherwise the Bid will not be considered. Amendments, if any, to the tender document will be notified in the above website as and when such amendments are notified. It is the responsibility of the bidders who have downloaded the tender documents from the website to keep themselves abreast of such amendments before submitting the tender documents.

Intending bidders are requested to register themselves on IREPS portal through <https://www.ireps.gov.in> for obtaining User ID and Password by paying Vendor registration fee and processing fee for participating in the above-mentioned tender.

“Vender Manual” containing the detailed guidelines for E-Tendering is available on www.ireps.gov.in

1.2.4. DFCCIL has decided to use process of E- Tendering for inviting this tender and thus the physical copy of the tender documents would not be sold/ accepted.

- i) Amendments, if any, to the tender document will be notified in the above website as and when such amendments are to be notified. It is the responsibility of the Tenderer who has downloaded the tender documents from the website to keep themselves abreast of such amendments and attach all the addendum/addenda/corrigendum/corrigenda (if any) duly signed along with the submission of the tender documents.
- ii) To participate in the E-bid submission, it is mandatory for the Bidders to get themselves registered with the IREPS (www.ireps.gov.in) and to have User ID and Password.

1.2.5. Bank Account Details of DFCCIL

Name	DFCCIL
Bank account number	317301010036304
IFSC code	UBIN0531731
Bank Name	Union Bank of India
Bank Branch	Home Street Branch, Mumbai
GST No.	27AACCD4768M1Z5

1.2.6. DOCUMENTS ESTABLISHING BIDDER'S ELIGIBILITY AND QUALIFICATION AS

PER BID: -

The bidder shall furnish, as part of his bid document establishing the bidder's eligibility. All these documents should be numbered and should be signed by bidder in each page.

- 1.2.6.1 Tender fee & EMD has to be deposited through e-payment only. The tender processing fees as per applicable rate payable through the e-payment gateways to IREPS portal is Non-refundable. Payments against this tender towards tender document cost and earnest money are to be done before the schedule date & time of submission of the tender otherwise the Bid will not be considered.
- 1.2.6.2 Each page of the tender papers is to be digitally signed by the tenderers or such person/s on his/their behalf that is/are legally authorized to sign for him / them.
- 1.2.6.3 Copy of PAN card.
- 1.2.6.4 The authenticated copy of registered partnership deed and registration of the firm from registrar of firm in case of partnership firm.
- 1.2.6.5 In case of proprietorship firm bidder will submit an affidavit, attested by Notary Public that "I am a sole proprietor of the firm in case of proprietorship firm on Non judicial stamp paper.
- 1.2.6.6 Bidder's profile duly filled in, as per tender document.
- 1.2.6.7 Power of Attorney for signing the Application. If applicable, the Power of Attorney for Lead Member of JV;
- 1.2.6.8 Article of association and memorandum in case of private/public limited company.
- 1.2.6.9 Copy of E.P.F. registration.
- 1.2.6.10 Copy of ESI Certificate.
- 1.2.6.11 Copy of GST registration no.
- 1.2.6.12 Certificate for non near relative in DFCCIL.
- 1.2.6.13 Memorandum of Understanding (in case of JV) as per Form-9 (Part-IV, Chapter- II of BID DOCUMENT.)

Note: - (i) Any discrepancy found in the downloaded tender document submitted by the bidder compared to uploaded tender document, the tender document uploaded by the DFCCIL will be

treated as valid and any changes (found in the tender document submitted by the bidder) at any stage, will be treated as fraud done to the DFCCIL, and will be liable to cancellation of agreement done (if any) & appropriate action will be taken against the bidder.

(ii) While submitting the Tender Online the Tenderer shall read the terms & conditions and accept the same in order to proceed further to submit their Tender.

1.2.7 The following “FOUR KEY INSTRUCTIONS for BIDDERS” must be assiduously adhered to:

1. Obtain individual Digital Signing Certificate (DSC or DC) well in advance of your first tender submission deadline on ETS.
2. Register your organization on ETS well in advance of your first tender submission deadline on ETS.
3. Get your organization’s concerned executives trained on ETS using online training module well in advance of your tender submission deadline on ETS.
4. Submit your bids well in advance of tender submission deadline on ETS (DFCCIL should not be responsible for any problem arising out of internet connectivity issues).

1.2.8 ACCESSING / PURCHASING OF BID DOCUMENTS :

The Bidder who wish to view free Notification and Tender Documents can visit DFCCIL’s website www.dfccil.com or www.ireps.gov.in or Central Procurement Portal www.eprocure.gov.in. Interested bidders who wish to participate should visit website www.ireps.gov.in, which is the only website for bidding their offer. Further the procedure is as follows:

It is mandatory for all the Bidders to have organizational class-III digital signature certificate from any of the licensed certifying agency (“CA”) Bidders can see the list of licensed CAs from the link www.cca.gov.in] to participate in e-tendering of DFCCIL.

To participate in the E-bid submission, it is mandatory for the Bidders to get themselves registered with IREPS (Indian Railway e-Procurement System) and to have user ID & password. The E-Tender portal is <http://www.ireps.gov.in>.

1.2.9 Tender Document Obtaining Process

1.2.9.1 It is mandatory for all Tenderers to have Class-III Digital Signature Certified from any of the Licensed Certifying Agencies (‘CA’) to participate in E-Tendering of DFCCIL, (Tenderer can see the list of Licensed CAs from the link www.cca.gov.in), in the name of the person who will submit the Online tender and is authorized to do so.

1.2.9.2 To participate in E-Tender, it is mandatory for Tenderers to get themselves registered with the

IREPS (www.ireps.gov.in) and to have User ID and Password.

1.2.9.3 www.ireps.gov.in is the only website for submission of tender. ‘Vendor Manual’ containing the detailed guidelines for E-Tendering is available on www.ireps.gov.in.

1.2.9.4 A master copy of the document downloaded from the website mentioned above shall be kept in the office of the tender inviting authority. In case of any discrepancy between the tender document downloaded from the website and the master copy, the latter shall prevail and shall be binding on the tenderer. The offer received shall be deemed to have been submitted on the document as uploaded and appearing in the website mentioned above whose master copy is kept in the office of the tender inviting authority and the agreement shall also be prepared on the basis of master document kept in the office of tender inviting authority.

1.2.10 Method for submission of bid documents

In this TENDER, the Tenderer has to participate in e-Tendering online. Detailed BID DOCUMENTS may be downloaded from IREPS and the Bid may be submitted online following the instructions appearing on the screen. A Vendor manual containing the detailed guidelines for e-tendering system is also available on IREPS. Only Electronic Form (to be uploaded on the IREPS)

Submission of Financial & Technical bid in prescribed Format in ON LINE MODE ONLY. No other mode of submission is accepted.

Tender Document fee & EMD in respect of e-tendering should accept through net banking or payment gateway only before the schedule date.

Note: The Bidder has to upload the Scanned copy of all required above said documents during Online Bid submission.

1.2.11 Online E- Bid System – Financial bids & Technical bids shall be submitted by the bidder at the same time. The Bid will be opened at the time and date notified in the tender notice.

1.2.12 Modification / Withdrawal of bids:

- (i) The Bidder may modify/ withdraw its e- bid after submission prior to the Bid Due Date & time. No Bid shall be modified / withdrawn by the Applicant on or after the Bid Due Date & time.
- (ii) Any alteration/ modification in the Bid or additional information supplied subsequent to the Bid Due Date, unless the same has been expressly sought for by the Authority, shall be disregarded.
- (iii) For modification of e-bid, applicant has to detach its old bid from e-tendering portal and upload / resubmit digitally signed modified bid.

- (iv) For withdrawal of bid, applicant has to click on withdrawal icon at e-tendering portal and can withdraw its e-bid.

1.2.13 Opening And Evaluation of Bids:

- (i) Opening of Bids will be done through online process.
- (ii) For participating in the tender, the authorized signatory holding Power of Attorney shall be the Digital Signatory. In case the authorized signatory holding Power of Attorney and Digital Signatory are not the same, the bid shall be considered non-responsive.

The DFCCIL Authority shall open bid documents received in electronic form at the scheduled date and time of opening of tender i.e. in the presence of the Bidders who choose to attend.

The DFCCIL Authority will subsequently examine and evaluate the Bids in accordance with the provisions set out in the BID DOCUMENTS.

1.2.14 Other instructions

- a) It is recommended that the Tenderer/vendor should visit the portal (ireps.gov.in), peruse the information provided under the relevant links and login to it and upload documents of bid.
- b) DFCCIL reserves right to cancel the tender before submission / opening of tender, postpone the tender submission / opening date and to accept / reject any or all tenders without assigning any reason thereof. DFCCIL's assessment of suitability as per eligibility criteria shall be final and binding.
- c) Information as required as per various Forms/Annexures to tender document should be submitted by the tenderers without fail strictly as per formats.
- d) The tender will be accepted only in e-tendering mode and no other mode of submission shall be accepted.
- e) The supporting documents for all Eligibility Criteria, JV (If applicable) etc. are essentially required to be uploaded on the website www.ireps.gov.in.
- f) Tenderers are required to give Un-Conditional Offers. A Conditional Offer is liable to be rejected. DFCCIL reserves the right to modify, expand, restrict, scrap, reject and re-float tender without assigning any reasons whatsoever.
- g) Tenderers are required to give Un-Conditional Offers. A Conditional Offer is liable to be rejected. DFCCIL reserves the right to modify, expand, restrict, scrap, reject and re-float tender without

assigning any reasons whatsoever.

- h) Contractor may visit the site on any working day to assess the Scope of Work before submitting their offer.
- i) Completed tender documents should be uploaded on or before the date and time of closing of tender specified in the NIT and tender document.
- j) Any tender received without Earnest money and cost of tender documents in the form as specified in the tender documents shall not be considered and shall be summarily rejected.
- k) DFCCIL reserves right to cancel the tender before submission /opening of tender, postpone the tender submission/ opening date and to accept/reject any or all tenders without assigning any reason thereof. DFCCIL's assessment of suitability as per eligibility criteria shall be final and binding.
- l) Tenderers may note that they are liable to be disqualified at any time during tendering process in case any of the information furnished by them is not found to be true. EMD of such tenderers shall be forfeited. The decision of DFCCIL in this regard shall be final and binding.
- m) Information as required as per various Forms to tender document should be submitted by the tenderers without fail strictly as per formats provided.

1.2.15 Completion Period as specified in the NIT.

As per publishing tender notice on e-Tender Portal www.ireps.gov.in

1.2.16 Validity of Tender Offer

As per publishing tender notice on e-Tender Portal www.ireps.gov.in

1.2.17 Price Variation Clause: Price Variation Clause (PVC) shall be applicable only in tender having advertised value above **Rs. 2 Crores and having completion period above 12 months.**

1.2.18 Bid Capacity Eligibility: The bid capacity is required to be submitted/uploaded with tender/bid when tender value is more than Rs.20.0 Crores. The tender/technical bid will be evaluated based on bid capacity formula detailed in Annexure-VI of IRSGCC-2022 (with all correction slips issued till date of invitation of tender). The tenderer/bidder shall have to submit/upload requisite information in a Performa (tabular form) as per Annexure-XI, XII & XIII with all supporting documents.

1.2.19 Scope of Work and Drawings

The scope of work & general features of work, site specific requirement, drawing, safety precaution, general feature of tender etc. is mentioned in Special Condition of Contract

attached with tender document.

1.2.20 Tender Form - 1 (Cover Letter)

The tenderer shall upload cover letter duly signed as per Performa given in **Annexure-I** on e-Tender Portal www.ireps.gov.in along with Technical Bid.

PART - I
Chapter II

GENERAL INFORMATION / DATA SHEET

PART - I
Chapter II
GENERAL INFORMATION/DATA SHEET

TENDER NOTICE NO.	MUM/EN/S/Works/659(R)/2024-25
Name of the work	<i>“Construction of RCC Pipe bridges(17nos) of 1600mm inner Diameter at Scattered locations by Micro tunnelling Method below IR and DFC Embankment besides existing Minor Bridges parallel along with Diva-Vasai Section of Central Railway for JNPT-Vaitarana Section of DFCCIL).”</i>
Employer	Chief General Manager, Mumbai (South), 7th floor, Central Railway, New Administrative Building, D.N. Road, Mumbai-400001
Type of Tender	Open-E-Tender
Type of Contract	Open E-Tender (Two Packet System)
Estimated Cost	Rs. 45,23,67,389.55/- (Forty-Five Crore Twenty-Three Lakhs Sixty-Seven Thousand Three Hundred Eighty-Nine and Fifty-Five Paise only) Including GST.
Completion Period	18 Months (Eighteen Months).
Earnest Money	Rs. 24,11,800.00 (Rupees Twenty-Four Lakh Eleven Thousand Eight Hundred Only)
Cost of Tender Document	Rs. 11800/- (10,000 + 18% GST) Rs. 10,000/- (Rs. Ten Thousand only) + 18 % GST 11,800/- to be paid online through payment gateway provided at www.ireps.gov.in payable in favour of "Dedicated Freight Corridor Corporation of India Limited, Mumbai South"
Security Deposit	5% of contract value as per Preamble and General Instruction to Tenderers.
Bidding Start Date	02.08.2024
Bidding closing Date and Time	16.08.2024 up to 15:00 Hrs

E-Tendering Web site Address:	www.ireps.gov.in www.ireps.gov.in/ its link at www.dfccil.com (Help Desk of IREPS: 011-23761525) For any clarification, help and registration for E- Tendering & matter relating to Digital Signature, contact at Help Desk.
Validity of offer	90 days
Joint Venture	Applicable
Maximum number of members in the JV	2 (Two)
Price Variation	Applicable
Pre-Bid Meeting	NA
Date of uploading of NIT & Bid documents (online publishing date)	As per IREPS
Date of document download/Sale (Online)	As per IREPS
Issue of Corrigendum if any	As per IREPS
Last date of submission of Tender	16.08.2024 up to 15:00 hours
Performance Bank Guarantee	Performance Guarantee (PG) have to be submitted within 21(Twenty-One) days from the date of issue of Letter of Acceptance (LOA), amounting to 5 % of the contract value in the form as give in clause 16. (4) of GCC.
Office Address	Office of the Chief General Manager, Dedicated Freight Corridor Corporation of India Limited, 7th Floor, New Administrative Building, D. N. Road, Mumbai – 400001 E-mail: pmasai@dfcc.co.in

PART- I
Chapter- III

PREAMBLE & GENERAL INSTRUCTION TO TENDERERS

1.3 PREAMBLE & GENERAL INSTRUCTIONS TO TENDERERS

1.3.1 Introduction

1.3.1.1 General

Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL), a public sector undertaking has been set up under the Indian Companies Act, 1956 for implementation of Dedicated Freight Corridor Project. Government of India is the sole shareholder of the DFCCIL.

Ministry of Railways (MOR), Government of India has planned to construct Dedicated Freight Corridor (DFC) covering about 3338 route Kilometres on Eastern and Western Corridors. The coverage of Eastern Corridor is from Ludhiana to Dankuni and Western Corridor is planned from Jawaharlal Nehru Port, Mumbai to Rewari /Tughlakabad /Dadri near Delhi. There will be a linkage between two corridors at Dadri.

1.3.1.2 Dedicated Freight Corridor Eastern DFC Route will be approximately 1839 Km long from Dankuni to Ludhiana via Dankuni – Asansole – Dhanbad – Gaya – Sonnagar - Mughalsarai - Allahabad - Kanpur - Tundla - Aligarh - Khurja - Bulandshahr – Meerut – Saharanpur – Ambala - Ludhiana.

Western DFC Route will be approximately 1520 Km long from Dadri to JNPT via Rewai – Iqbalgarh - Vadodara- JNPT.

Proposed alignment of DFC has been generally kept parallel to existing Indian Railway line except provision of detours at some stations where the existing yards/cities are congested. Level Crossings (LC's) are generally unsafe locations and also a congestion points for road/rail's users. These LCs are operational bottlenecks for Railways /DFCCIL in terms of loss in punctuality and reduction in line capacity.

1.3.1.3 Scope of Work

On behalf of MD DFCCIL, **Office of the Chief General Manager, Dedicated Freight Corridor Corporation of India Limited**, 7th Floor, New Administrative Building, D. N. Road, Mumbai – 400001, herein after referred to as 'DFCCIL' is inviting e-tenders from Firms/ Companies/Joint Ventures having requisite experience and financial capacity for execution of the following work: “Construction of RCC Pipe bridges(17nos) of 1600mm inner Diameter at Scattered locations by Micro tunnelling Method below IR and DFC Embankment besides existing Minor Bridges parallel along with Diva-Vasai Section of Central Railway for JNPT-Vaitarana Section of DFCCIL”

The proposed work for construction of RCC Pipe bridges will be as per approved drawing, design, specification and as instructed by Engineer-in-Charge of DFCCIL i.e., Executive/JPM/APM/Dy.PM/PM/Dy. CPM of the section.

The detailed scope of works are mentioned in Special Condition of Contract attached with tender document.

1.3.1.4 Cost of the work: The estimated cost of the work is **Rs. 45,23,67,389.55/-** shown as per NIT which includes GST.

The tenderer shall be governed by General Conditions of Contract (GCC), Preamble and General Instructions to Tenderers (ITT) and Special Conditions of Contract (SCC). Wherever, there is a conflict in any condition between GCC and Special Conditions of Contract mentioned in the tender documents, the condition mentioned in Special Conditions of Contract will prevail. However, decision of DFCCIL in this connection shall be final and binding to contract.

Part I, Chapter-IV and V of the tender document contains General Conditions of Contract and Special Conditions of Contract specific to this work and shall be applicable in the contract.

1.3.1.5 Location:

Works shall be executed in the jurisdiction of Chief General Manager/ DFCCIL/Mumbai South Unit. However, DFCCIL reserves right to change the site of work anywhere in adjacent / adjoining area of the work defined in Para 1.3.1.3 above in the jurisdiction and the contractor shall be bound to execute the work without any extra cost.

1.3.2 Tender Bid:

1.3.2.1 The Tender Bid shall be submitted through online only on website www.ireps.gov.in as under: -

1.3.2.2 Form of Tender: The Tender documents shall be in Two packet system viz:-

Containing technical bid and financial bid. Detailed credentials as per the requirement of eligibility criteria and all tender papers along with Summary of Prices and Schedule of Prices are to be submitted in two packet. Summary of Prices and Schedule of Prices with percentage above/below/at par duly filled in are to be submitted in "FINANCIAL BID".

Tenders not submitted in the proper Forms are liable to be rejected.

(i) Documents to be submitted in the office of CGM/Mumbai/South/ DFCCIL:

S. No	Description	Documents
(1)	NIL	NIL

(ii) Documents to be enclosed with the Technical BID:-

S. No	Description	Documents
(1)	Tender Form - 1 (Cover Letter) Offer letter complete.	Form No.1, Annexure-I of Tender Form
(2)	Tenderer's credentials in accordance With para 1.3.13, 1.3.13.6 & 1.3.13.7 of Preamble and General Instructions to Tenderers.	Form No. 2A,2B &2C
(3)	Certificates for authenticity of documents	Form No. 22
(4)	Earnest money in accordance with Para 1.3.8 and Cost of Tender Document in case of downloaded tenders in accordance with Para1.3.4.3 of Preamble and General Instructions to Tenderers in an envelope.	
(5)	Written confirmation authorizing the signatory of the tender to commit the tenderer and other documents as per format as applicable, in accordance with para 1.3.6 of Preamble and General Instructions to Tenderers.	Form 12A or 12 B
(6)	A copy of the tender documents including amendments digitally signed by the tenderer in token of his having studied the tender papers carefully shall be attached with the tender.	
(7)	Summary of Prices, Schedule of Prices & Total Prices	Shall be quoted on <u>www.ireps.gov.in</u> system

(iii) Documents to be enclosed for Financial Bid:

(1)	Summary of Prices, Schedule of Prices & Total Prices. Form No. 3 &4 (Financial schedule on www.ireps.gov.in)
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DFCCIL RAILWAY

TENDER FORM (First Sheet)

Tender No. _____

Name of Work _____

To

The Chief General Manager,

DFCCIL, Mumbai South

Acting through the _____ Railway

I/We _____ have read the various conditions to tender attached hereto and agree to abide by the said conditions. I/We also agree to keep this offer open for acceptance for a period of _____ days from the date fixed for closing of the tender and in default thereof, I/We will be liable for forfeiture of my/our "Bid Security". I/We offer to do the work for _____ DFCCIL, at the rates quoted in the attached bill(s) of quantities and hereby bind myself/ourselves to complete the work in all respects within _____ months from the date of issue of letter of acceptance of the tender.

2. I/We also hereby agree to abide by the Indian Railways Standard General Conditions of Contract, with all correction slips up-to-date and to carry out the work according to the Special Conditions of Contract and Specifications of materials and works as laid down by Railway in the annexed Special Conditions/Specifications, Standard Schedule of Rates (SSOR), DSR Vol-I & Vol-II and its specification with all correction slips up-to-date for the present contract.

3. A Bid Security of Rs. _____ has already been deposited online/ submitted as Bank Guarantee bond. Full value of the Bid Security shall stand forfeited without prejudice to any other right or remedies in case my/our Tender is accepted and if:

- (a) I/We do not submit the Performance Guarantee within the time specified in the Tender document;
- (b) I/We do not execute the contract documents within seven days after receipt of notice issued by the DFCCIL that such documents are ready; and
- (c) I/We do not commence the work within fifteen days after receipt of orders to that effect.

4. (a) I/We am/are a Start-up firm registered by Department of Industrial Policy and Promotion (DIPP) and my registration number is valid up to (Copy enclosed) and hence exempted from submission of Bid Security.

5. We are a Labour Cooperative Society and our Registration No. is withand hence required to deposit only 50% of Bid Security.

6. Until a formal agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.

Signature of Witnesses:

(1) _____

Signature of Tenderer(s)

(2) _____

Date _____

Address of the Tenderer(s)

TENDER FORM (Second Sheet)

1. **Instructions to Tenderers and Conditions of Tender:** The following documents form part of Tender / Contract:
- a) Tender Forms
 - b) Special Conditions/Specifications (enclosed)
 - c) Schedule of approximate quantities (enclosed)
 - d) Standard General Conditions of Contract-2022 of Indian Railways and Standard Specifications (Works and Materials) of CPWD-2019 as amended/corrected up to latest correction slips are to be followed.
 - e) CPWD Delhi Schedule of Rates (Vol-I & Vol-II) of 2023, Delhi Schedule of Rates (E&M)-2022, SOR 2022-23 R&B Electrical works as amended / corrected up to latest correction slips are to be followed.
 - f) All general and detailed drawings pertaining to this work which will be issued by the Engineer/DFCCIL or his representatives (from time to time).
2. The Tenderer(s) shall quote his / their rates as a percentage above or below the Schedule of Rates of Tender and must tender for all the items shown in the Schedule of approximate quantities attached. The quantities shown in the attached Schedule are given as a guide and are approximate only and are subject to variation according to the needs of the DFCCIL. The DFCCIL does not guarantee work under each item of the Schedule. The tenderer(s) shall quote rates / rebates only at specified place in online financial Bid. Any revision of rates / rebates submitted (quoted) through a separate letter whether enclosed with the bid (Tender Form) or submitted separately or mentioned elsewhere in the document other than specified place shall be **summarily ignored and will not be considered.**
3. Tenders containing erasures and / or alterations of tender documents are liable to be rejected. Any correction made by tender(s) in his/their entries must be attested by him / them.
4. The works are required to be completed within a period of As per publishing tender notice on e-Tender Portal www.ireps.gov.in, from the date of issue of acceptance letter.
5. Tenders not submitted in the proper Forms are liable to be rejected.
6. **Documents to be enclosed with the Technical BID –**

S. No	Description	Documents
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(1)	Tender Form - 1 (Cover Letter) Offer letter complete.	Form No.1, Annexure-I of Tender Form
(2)	Tenderer's credentials in accordance With para 1.3.13, 1.3.13.6 & 1.3.13.7 of Preamble and General Instructions to Tenderers.	Form No. 2A,2B &2C
(3)	Certificates for authenticity of documents	Form No. 22
(4)	Earnest money in accordance with Para 1.3.8 and Cost of Tender Document in case of downloaded tenders in accordance with Para1.3.4.3 of Preamble and General Instructions to Tenderers in an envelope.	
(5)	Written confirmation authorizing the signatory of the tender to commit the tenderer and other documents as per format as applicable, in accordance with para 1.3.6 of Preamble and General Instructions to Tenderers.	Form 12A or 12 B
(6)	A copy of the tender documents including amendments digitally signed by the tenderer in token of his having studied the tender papers carefully shall be attached with the tender.	
(7)	Summary of Prices, Schedule of Prices & Total Prices	Shall be quoted on <u>www.ireps.gov.in</u> system

7. Documents to be enclosed with the **Financial BID** -

(1)	Summary of Prices, Schedule of Prices & Total Prices. Form No. 3 &4 (Financial schedule on www.ireps.gov.in)
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Refer Part IV, Chapter I, for Tender Forms and Appendix-1 for checklist.

1.3.3 Tender Document

This tender document consists of following five parts along with Instructions to bidders for online bidding:

PART/CHAPTERS	DESCRIPTION
PART – I	
Chapter I	Notice Inviting E-Tender

Chapter II	General Information / Data sheet
Chapter III	Preamble and General Instructions to Tenderers
Chapter IV	General Conditions of Contract
Chapter V	Special Conditions of Contract
PART – II	Technical Specifications
PART – III	Additional Technical Specifications
PART – IV	
Chapter I	Tender Forms (including Schedule of Prices)
PART – V	Drawings

1.3.4 Sale and Submission of Tender Document

1.3.4.1 The tender documents for this work can be downloaded from website www.ireps.gov.in, www.dfccil.com, and Central Procurement Portal, eprocure.gov.in. and offer of the same shall be uploaded in the website www.ireps.gov.in. Amendment(s) (if any) will be uploaded on above mentioned websites. For submitting the tender, the Tender documents and amendment(s) can be downloaded from the www.ireps.gov.in by the registered tenderers only.

1.3.4.2 Clause applicable for tender documents downloaded from Internet.

Tenderer/s is free to download tender documents at their own cost, for the purpose of perusal as well as for using the same as tender document for submitting their offer. Master copy of the tender document will be available in the **Office of the Chief General Manager, Dedicated Freight Corridor Corporation of India Limited, 7th Floor, New Administrative Building, D. N. Road, Mumbai – 400001** After award of the work, an agreement will be drawn up. The agreement shall be prepared based on the master copy available in the Office of the **Office of the Chief General Manager, Dedicated Freight Corridor Corporation of India Limited, 7th Floor, New Administrative Building, D. N. Road, Mumbai – 400001 India** and not based on the tender documents submitted by the Tenderer. In case of any discrepancy between the tender documents downloaded from the internet and the master copy, later shall prevail and will be binding on the Tenderers. No claim on this account shall be entertained.

1.3.4.3 **Cost of Tender documents downloaded from internet.**

For submission of the tender, the Tender documents and Amendment(s), if any, is/are available on www.ireps.gov.in and the same can be downloaded and used as tender documents for submitting the offer. The cost of the tender document is mentioned in NIT. The cost of the tender document shall be deposited through e-payment mode at www.ireps.gov.in only. In case, the cost of the tender document as detailed above is not deposited, tender will be summarily rejected.

1.3.4.4 Complete tender documents must be submitted online duly completed in all respect up to the scheduled date and time mentioned in the Notice Inviting E-Tender.

- 1.3.4.5 Tender Document to be downloaded from website www.ireps.gov.in and then, filled (through digital signature) on the same website and not to be submitted in hard copy at all. The offer (after filling the rates) should neither be scanned & uploaded, nor, the hard copy of the same should be submitted.
- 1.3.4.6 Deleted
- 1.3.4.7 Each page of the tender papers is to be digitally signed by the tenderers or such person/s on his/their behalf that is/are legally authorized to sign for him / them.
- 1.3.4.8 Deleted
- 1.3.4.9 **Care in Submission of Tenders –**
- 1.3.4.9.1 Before submitting a tender, the tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the works, that all conditions liable to be encountered during the execution of the works are taken into account and that the quoted rates by tenderer in tender forms are adequate and all-inclusive in item of Taxes, Duties & Levies etc. in terms of General/Special Conditions of Contract for the completion of works to the entire satisfaction of the Employer.
- 1.3.4.9.2 Tenderers will examine the various provisions of the Central Goods and Services Tax Act, 2017(CGST)/Integrated Goods and Services Tax Act, 2017(IGST)/Union Territory Goods and Services Tax Act, 2017(UTGST)/respective state's State Goods and Services Tax Act (SGST) also, as notified by Central/State Govt & as amended from time to time and applicable taxes before bidding. Tenders will ensure that full benefit of Input Tax (ITC) likely to be availed by them is duly considered while quoting rates.
- 1.3.4.9.3 The successful tenderer who is liable to be registered under CGST/IGST/UTGST/SGST Act shall submit GSTIN along with other details required under CGST/IGST/UTGST/SGST Act to DFCCIL immediately after the award of contract, without which no payment shall be released to the contractor. The contractor shall be responsible for deposition of applicable GST to the concerned authority.
- 1.3.4.10 Tenders containing erasures and/or alteration of the tender documents are liable to be rejected.
- All communication between the Employer and the tenderer shall be in writing. For the purposes of seeking clarification, the Employer's address is: **Office of the Chief General Manager, Dedicated Freight Corridor Corporation of India Limited, 7th Floor, New Administrative Building, D. N. Road, Mumbai – 400001**. Electronic mail address: pmasai@dfcc.co.in
- 1.3.4.11 Tenderers are required to give Un-Conditional offers. A Conditional Offer is liable to be rejected. DFCCIL reserves the right to modify, expand, restrict, cancel, reject and re-float tender without assigning any reasons whatsoever.

1.3.4.12 The bidder shall submit only one bid in the capacity of an individual or sole proprietor, partnership firm or company. Violation of this condition is liable to disqualify the tender in which bidder has participated and EMD of all such tenderers shall stand forfeited.

1.3.4.13 Withdrawal of Tender: No tender can be withdrawn after scheduled date and time of submission and during tender validity period.

1.3.5 Opening of Tender:

1.3.5.1 Tender will be opened at the scheduled date and time mentioned in the Para 1.1.1 of Notice Inviting E-Tender in the office of Chief General Manager, Mumbai (South), 7th floor, Central Railway, New Administrative Building, D.N. Road, Mumbai-400001, India in through IREPS at the prescribed date and time.

1.3.5.2 After the opening of tender documents of all the tenderers, these bids shall be scrutinized and analysed. If found necessary by the Employer, the tenderers shall be asked to furnish clarifications and the Employer may also hold discussions with the tenderers after giving due notice. The names of the tenderers whose bid are considered complete and meet eligibility criteria shall be short listed.

1.3.5.3 The earnest money of non-qualifying tenderers will be returned back within a reasonable period.

1.3.6 Constitution of the Firm:

1.3.6.1 The tenderer shall clearly specify whether the tender is submitted on his own (Proprietary Firm) or on behalf of a Partnership Firm / Company / Joint Venture (JV) / Registered Society / Registered Trust / Hindu Undivided Family (HUF) / Limited Liability Partnership (LLP) etc. The tenderer(s) shall enclose the attested copies of the constitution of their concern and copy of PAN Card along with their tender. Tender Documents in such cases are to be signed by such persons as may be legally competent to sign them on behalf of the firm, company, association, trust or society, as the case may be.

1.3.6.2 Documents to be Submitted Along with Tender: Following documents shall be submitted by the tenderer:

1.3.6.2.1 Sole Proprietorship Firm:

I. All documents in terms of Para 1.3.13 of the Preamble and General Instruction to Tenderers Part I, Chapter III.

1.3.6.2.2 HUF:

I. A copy of notarized affidavit on Stamp Paper declaring that he who is submitting the tender on behalf of HUF is in the position of 'Karta' of Hindu Undivided Family (HUF) and he has the authority, power and consent given by other members to act on behalf of HUF.

II. All other documents in terms of Para 1.3.13 of the Preamble and General Instruction to

Tenderers Part I, Chapter III.

1.3.6.2.3 Partnership Firm:

- I. All documents as mentioned in para 1.3.33 of the Preamble and General Instruction to Tenderers Part I, Chapter III.

1.3.6.2.4 Joint Venture (JV):

- I. All documents as mentioned in para 1.3.32 of the Preamble and General Instruction to Tenderers Part I, Chapter III.

1.3.6.2.5 Company registered under Companies Act 2013:

- I. The copies of MOA (Memorandum of Association) / AOA (Articles of Association) of the company
 - II. A copy of Certificate of Incorporation
 - III. A copy of Authorization/Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual to sign the tender on behalf of the company and create liability against the company.
- IV. All other documents in terms Para 1.3.13 of the Preamble and General Instruction to Tenderers Part I, Chapter III.

1.3.6.2.6 LLP (Limited Liability Partnership):

- I. A copy of LLP Agreement
- II. A copy of Certificate of Incorporation
- III. A copy of Power of Attorney/Authorization issued by the LLP in favour of the individual to sign the tender on behalf of the LLP and create liability against the LLP.
- IV. An undertaking by all partners of the LLP that they are not blacklisted or debarred by Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP or JV in which they were / are partners/members. Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.
- V. All other documents in terms of Para 1.3.13 of the Preamble and General Instruction to Tenderers Part I, Chapter III.

1.3.6.2.7 Registered Society & Registered Trust:

- I. A copy of Certificate of Registration
- II. A copy of Memorandum of Association of Society/Trust Deed
- III. A copy of Power of Attorney in favour of the individual to sign the tender documents and create liability against the Society/Trust.

- IV. A copy of Rules & Regulations of the Society
 V. All other documents in terms of Para 1.3.13 of the Preamble and General Instruction to Tenderers Part I, Chapter III.

1.3.6.3 If it is NOT mentioned in the submitted tender that tender is being submitted on behalf of a Sole Proprietorship firm / Partnership firm / Joint Venture / Registered Company etc., then the tender shall be treated as having been submitted by the individual who has signed the tender

1.3.6.4 After opening of the tender, any document pertaining to the constitution of Sole Proprietorship Firm / Partnership Firm / Registered Company/ Registered Trust / Registered Society / HUF/LLP etc. shall be neither asked nor considered, if submitted. Further, no suo moto cognizance of any document available in public domain (i.e., on internet etc.) or in DFCCIL/Railway's record/office files etc. will be taken for consideration of the tender, if no such mention is available in tender offer submitted.

1.3.6.5 A tender from JV shall be considered only where permissible as per the tender conditions.

1.3.6.6 The DFCCIL will not be bound by any change of power of attorney or in the composition of the firm made subsequent to the submission of tender. DFCCIL may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Contractor.

The tenderer whether sole proprietor / a company or a partnership firm / joint venture (JV) / registered society / registered trust / HUF / LLP etc if they want to act through agent or individual partner(s), should submit along with the tender, a copy of power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person, specifically authorizing him/them to sign the tender, submit the tender and further to deal with the Tender/ Contract up to the stage of signing the agreement except in case where such specific person is authorized for above purposes through a provision made in the partnership deed / Memorandum of Understanding / Article of Association /Board resolution, failing which tender shall be summarily rejected.

A separate power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner(s) of the firm or any other person, shall be submitted after award of work, specifically authorizing him/them to deal with all other contractual activities subsequent to signing of agreement, if required.

Note: A Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostille certificate.

1.3.7 Validity of Tender: - Tenderer shall keep his offer open as mentioned in the Tender Notice

(NIT).

1.3.8 Earnest Money Deposit:

For the subject tender, the Earnest Money deposit shall be as mentioned in the data Sheet/NIT and shall be governed below. In case the Earnest Money Deposit for the tender is applicable, the below instructions shall be applicable.

1.3.8.1 The tenderer shall be required to deposit earnest money with the tender for the due performance with the stipulation to keep the offer open till such date as specified in the tender, under the conditions of tender.

Note :

(a) Any firm recognized by Department of Industrial Policy and Promotion (DIPP) as “Startups” shall be exempted from payment of earnest money deposit detailed above.

(b) 100% Govt. owned PSUs shall be exempted from payment of earnest money deposit detailed above.

(c) Labour Cooperative Societies shall deposit only 50% of above earnest money deposit detailed above.

1.3.8.2 It shall be understood that the tender documents have been issued to the tenderer and the tenderer is permitted to tender in consideration of stipulation on his part, that after submitting his tender he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the Engineer. Should the tenderer fail to observe or comply with the said stipulation, the aforesaid amount shall be liable to be forfeited to the DFCCIL.

1.3.8.3 If his tender is accepted this earnest money mentioned above will be retained as part security for the due and faithful fulfilment of the contract in terms of Clause 16 of the Standard General Conditions of Contract. The Earnest Money of other Tenderers shall, save as herein before provided, be returned to them, but the DFCCIL shall not be responsible for any loss or depreciation that may happen thereto while in their possession, nor be liable to pay interest thereon.

1.3.8.4 The Earnest Money shall be deposited through e-payment gateway or as mentioned in tender documents.

1.3.8.5 The tender must be accompanied by Earnest Money as mentioned above deposited through e-payment gateway or as mentioned in tender documents, failing which the tender shall not be considered.

1.3.8.6 The Tenderer(s) shall keep the offer open for a minimum period of 90 days from the date of opening of the Tender. It is understood that the tender documents have been issued to the Tenderer(s) and the Tenderer(s), is/are permitted to tender in consideration of the stipulation on his / their part that after submitting his / their tender subject to the period being extended further, if required by mutual agreement from time to time, he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the DFCCIL, Should the Tenderer fail to observe or comply with the foregoing stipulation, the amount deposited as

Earnest Money for the due performance of the above stipulation, shall be forfeited to the DFCCIL.

1.3.9 Bid Security:

1)

- a) The tenderer shall be required to submit the Bid Security with the tender for the due performance with the stipulation to keep the offer open till such date as specified in the tender, under the conditions of tender.

Note:

- i. The Bid Security shall be rounded off to the nearest Rs. 100. This Bid Security shall be applicable for all modes of tendering.
- ii. Any firm recognized by Department of Industrial Policy and Promotion (DIPP) as 'Startups' shall be exempted from payment of Bid Security detailed above.
- iii. Labour Cooperative Societies shall submit only 50% of above Bid Security detailed above.
- b) It shall be understood that the tender documents have been issued to the tenderer and the tenderer is permitted to tender in consideration of stipulation on his part, that after submitting his tender he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the Engineer. Should the tenderer fail to observe or comply with the said stipulation, the aforesaid amount shall be liable to be forfeited to the DFCCIL.
- c) If his tender is accepted, this Bid Security mentioned in sub para (a) above will be retained as part security for the due and faithful fulfilment of the contract in terms of Clause 16 of the General Conditions of Contract, Part-I Chapter IV. The Bid Security of other Tenderers shall, save as herein before provided, be returned to them, but the DFCCIL shall not be responsible for any loss or depreciation that may happen thereto while in their possession, nor be liable to pay interest thereon.
- 2) The Bid Security shall be deposited either in cash through e-payment gateway or submitted as Bank Guarantee bond from a scheduled commercial bank of India or as mentioned in tender documents. The Bank Guarantee bond shall be as per Form No. 26 and shall be valid for a period of 90 days beyond the bid validity period
- 3) **In case, submission of Bid Security in the form of Bank Guarantee, following shall be ensured:**
- i. A scanned copy of the Bank Guarantee shall be uploaded on e-Procurement Portal (IREPS) while applying to the tender.
- ii. The original Bank Guarantee should be delivered in person to the official nominated as indicated in the tender document within 5 working days of deadline of submission of bids.

- iii. Non submission of scanned copy of Bank Guarantee with the bid on e-tendering portal (IREPS) and/or non-submission of original Bank Guarantee within the specified period shall lead to summary rejection of bid.
- iv. The Tender Security shall remain valid for a period of 90 days beyond the validity period for the Tender.
- v. The details of the BG, physically submitted should match with the details available in the scanned copy and the data entered during bid submission time, failing which the bid will be rejected.
- vi. The Bank Guarantee shall be placed in an envelope, which shall be sealed. The envelope shall clearly bear the identification “**Bid for the ***** Project**” and shall clearly indicate the name and address of the Bidder. In addition, the Bid Due Date should be indicated on the right-hand top corner of the envelope.
- vii. The envelope shall be addressed to the officer and address as mentioned in the tender document.
- viii. If the envelope is not sealed and marked as instructed above, the DFCCIL assumes no responsibility for the misplacement or premature opening of the contents of the Bid submitted and consequent losses, if any, suffered by the Bidder.

1.3.10 CONSIDERATION OF TENDERS

*Similar Nature of Work physically completed within qualifying period as given in **Para 1.3.13** of this tender document (even though the work might have been commenced before the qualifying period) should only be considered in evaluating the eligibility criteria.*

1.3.10.1 Right of DFCCIL to Deal with Tenders:

Notwithstanding anything contained in tender document, DFCCIL Administration reserves the right to accept or reject any tender and to annul the tendering process, and reject all Tenders at any time during Tendering process, without thereby any liability to the affected Tenderer(s) or any obligation to inform the affected Tenderer(s) for DFCCIL action. In the event DFCCIL reject or annuls all the tender(s), it may at its discretion to invite fresh Tender.

- i. The authority for the acceptance of the tender will rest with the DFCCIL. It shall not be obligatory on the said authority to accept the lowest tender or any other tender, and tenderer(s) shall neither demand any explanation for the cause of rejection of his/their tender nor the DFCCIL to assign reasons for declining to consider or reject any particular tender or tenders.
- ii. If the tenderer(s) deliberately gives / give wrong information in his / their tender or creates / create circumstances for the acceptance of his / their tender, the DFCCIL reserves the right to reject such tender at any stage.
- iii. If the tenderer(s) expire(s) after the submission of his / their tender or after the acceptance of his / their offer, the DFCCIL shall deem such tender cancelled. If a partner of a firm expires

after the submission of their tender or after the acceptance of their tender, the DFCCIL shall deem such tender as cancelled, unless the firm retains its character.

1.3.10.2 System of Tendering

System of tendering for tender is as per publishing tender notice on e-Tender Portal www.ireps.gov.in.

- i. **Single Packet System of Tendering:** Technical & Financial bid shall be opened at a time. In case of tenders costing less than Rs.10Crore single packet tender system will be followed and technical & financial offer of the tenderer/s shall be opened and evaluated at the same time.
- ii. **Two Packets System of Tendering:** With a view to assess the tenders technically without being influenced by the financial bids, 'Two Packets System of tendering' shall be adopted for contract valuing more than **Rs.10crores** or as advised by Railway Board time to time by updated policy guide lines. In this system, first technical bid will be opened and evaluated. Thereafter, financial bids of the technically successful tenderer shall only be opened.

1.3.10.3 Opening of Tender

The e-tender is opened after closing date and time of submission online bids on Tender Portal www.ireps.gov.in through Digital Signature Certificate/Encryption Certificate of concern Authorized Officer of DFCCIL on specified date and time. However, if date of tender opening is declared as Holiday, the tender will be opened at the same time on next working day.

1.3.10.4 Conditional offer and Alternative proposal by Tenderer

The tenderer/bidder shall submit offers that fully comply with the requirements of the Tender Documents including the Conditions of Contract, Design and Specification requirements if any. *Conditional offer or alternative offers will not be considered intender evaluation and will be **SUMMARILY REJECTED**.* The tenderer/bidder shall have no claims in this regard whatsoever.

1.3.10.5 Make in India Policy

Provisions of Make in India Policy 2017 issued by Govt. of India, as amended from time to time, shall be followed for consideration of tenders.

1.3.10.6 Withdrawal of Offer

- 1.3.10.7 No Tender offer can be withdrawn in the interval between the after due date & time of submission and expiration of the Tender validity period. Withdrawal of offer during this period shall result in forfeiture of Tenderer Earnest Money **Omission, Discrepancies & Clarification** Should a tenderer find discrepancies in or omissions from the drawings or any of the Tender Forms or should he be in doubt as to their meaning, he should at once notify the authority inviting tenders. The tender inviting authority may, if deemed necessary, clarify the same to all tenderer. It shall be understood that every endeavour has been made to avoid any error which can materially affect the basis of tender and successful tenderer shall take upon himself and

provide for the risk of any error which may subsequently be discovered and shall make no subsequent claim on account thereof.

1.3.10.8 Evaluation of Tender/ Bids

The tender offers will be evaluated by DFCCIL to check whether he/they meet the Eligibility Criteria as laid down in **Para 1.3.13** below. Thereafter declaration about not having conflict of interest, that Tender does not contain any condition and other relevant documents attached with Tender Document may be verified by DFCCIL. To facilitate evaluation DFCCIL may at its sole discretion, seek clarifications in writing from any Tenderer on the attached documents in the format as considered appropriate by DFCCIL. Notwithstanding anything to the contrary contained in the Tender Documents. DFCCIL may, at its sole discretion, waive any minor infirmity, non-conformity or irregularity in a Tender Document that does not constitute a material deviation and that does not prejudice or affect the relative position of any Tenderer, provided it confirms to all the terms, condition of Tender Documents without any material deviation, objection, conditionality, or reservations.

“No post tender correspondence for submission of additional documents shall be entertained after opening of the Technical & Commercial offers. Even suo-motoposttenderlettersofthetendersshallbetreatedasNULL&VOID.”

1.3.10.9 Clarification of Bids: To assist in the examination, evaluation & comparison and prequalification of the Tender, the DFCCIL may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder that is not in response to a request by the DFCCIL shall not be entertained or considered. The DFCCIL request for clarification and the response of the bidder in this regard shall be in writing.

However, if a Bidder does not provide clarification of its bid by the date and time communicated in the DFCCIL request for clarification, the bid shall be evaluated as per the documents submitted along with the bid.

1.3.10.10 Execution of Contract Agreement: -

The Tenderer whose tender is accepted shall be required to appear in person at the, as the case may be, or if tenderer is a firm or corporation, a duly authorized representative shall appear (there would be no need for appear in person if agreement is signed digitally) and execute the contract agreement within seven days of notice from DFCCIL that the Contract Agreement is ready. Failure to do so shall constitute a breach of the agreement affected by the acceptance of the tender. The Contract Agreement shall be entered into by DFCCIL only after submission of valid Performance Guarantee by the Contractor. In such cases the DFCCIL may determine that such tenderer has abandoned the contract and there upon his tender and acceptance thereof shall be treated as cancelled and the DFCCIL shall be entitled to forfeit the full amount of the Bid Security and other dues payable to the Contractor under this contract. The failed Contractor shall be debarred from participating in the re-tender for that work.

1.3.11 Security Deposit on Acceptance of Tender:

The security deposit / rate of recovery / mode of recovery on acceptance of tender shall be as per the Para 16(1) to 16(3) Of General Conditions of Contract (GCC).

1.3.12 Tenderer's Address

The tenderer should state in the tender his postal address legibly and clearly. Any communication sent in time, to the tenderer by post at his said address shall be deemed to have reached the tenderer duly and in time. Important documents should be sent by registered post.

1.3.13 Eligibility Criteria and Tender Credentials

1.3.13.1 Technical Eligibility Criteria:

<i>Criteria</i>		<i>Compliance Requirement</i>		<i>Documents</i>
<i>Requirement</i>		<i>Single Entity</i>	<i>Joint venture</i>	<i>Submission Requirements</i>
(i)	<p>The tenderer /JV firm (as per clause no. 1.3.33.15.1 of Preamble & general instructions to Tenderers) must have satisfactorily completed any of the following during last 7 years, ending last day of month previous to the one in which tender is invited:-</p> <ul style="list-style-type: none"> <input type="checkbox"/> Three similar works each costing not less than the amount equal to 30% of advertised value of the tender, or <input type="checkbox"/> Two similar works each costing not less than the amount equal to 40% of advertised value of the tender, or <input type="checkbox"/> One similar works costing not less than the amount equal to 60% of advertised value of the tender, 	Must meet requirement	As per clause no.1.3.32.15.1 Preamble & general instructions to Tenderers)	tenderer shall submit the completion certificates/ certified completion certificates from the client(s) and or Photocopies of original certificates of client.

Note: In case the tenderer is a partnership firm, the work experience shall be the name of partnership firm only.

- A. The tenderer must have successfully completed or substantially completed any one of the following categories of work(s) during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:

- i. Three similar works each costing not less than the amount equal to 30% of advertised value of the tender, or
- ii. Two similar works each costing not less than the amount equal to 40% of advertised value of the tender, or
- iii. One similar work costing not less than the amount equal to 60% of advertised value of the tender.

Similar works means

Similar Works means: Any Civil Engineering Work involving Construction of Track Bridges , ROB/RUB's/Limited Height Subway(LHS) by box pushing or box Pulling.

OR

Any Civil Engineering Work involving Construction by Micro tunnelling Methods of minimum diameter of 900mm.

(Note: The tenderer should have completed at least one work of box/pipe pushing under running track of any value in last seven years)

- B.** In case of tenders for composite works (e.g., works involving more than one distinct component, such as Civil Engineering works, S&T works, Electrical works, OHE works etc. and in the case of major bridges – substructure, superstructure etc.), tenderer must have successfully completed or substantially completed any one of the following categories of work(s) during last 07 (seven) years, ending last day of month previous to the one in which tender is invited:
- i. Three similar works each costing not less than the amount equal to 30% of advertised value of each component of tender, or
 - ii. Two similar works each costing not less than the amount equal to 40% of advertised value of each component of tender, or
 - iii. One similar work each costing not less than the amount equal to 60% of advertised value of each component of tender.

Note for B: Separate completed works of minimum required values shall also be considered for fulfilment of technical eligibility criteria for different components.

- C.** In such cases, what constitutes a component in a composite work shall be clearly pre-defined with estimated tender cost of it, as part of the tender documents without any ambiguity.
- D.** To evaluate the technical eligibility of tenderer, only components of work as stipulated in tender documents for evaluation of technical eligibility, shall be considered. The scope of work covered in other remaining components shall be either executed by tenderer himself if he has work experience as mentioned in para 1.3.13.1 of the Preamble and General Instruction to Tenderers through subcontractor fulfilling the requirements as per Para 1.3.13.1 or jointly i.e., partly himself and remaining through subcontractor, with prior approval of Chief General

Manager/General Manager in writing.

- E.** However, if required in tender documents by way of Special Conditions, a formal agreement duly notarised, legally enforceable in the court of law, shall be executed by the main contractor with the subcontractor for the component(s) of work proposed to be executed by the subcontractor(s), and shall be submitted along with the offer for considering subletting of that scope of work towards fulfilment of technical eligibility. Such subcontractor must fulfil technical eligibility criteria as follows:
- F.** The subcontractor shall have successfully completed at least one work similar to work proposed for subcontract, costing not less than 35% value of work to be sublet, in last 5 years, ending last day of month previous to the one in which tender is invited through a works contract.
- G.** *Note: for subletting of work costing up to Rs. 50 lakhs, no previous work experience of subcontractor shall be asked for by the DFCCIL/Railway.*
- H.** In case after award of contract or during execution of work it becomes necessary for contractor to change subcontractor, the same shall be done with subcontractor(s) fulfilling the requirements as per Para 1.3.13.1, with prior approval of GM/Dy.CPM/DFCCIL in writing.

Note for Item (1.3.13.1):

Work experience certificate from private individual shall not be considered. However, in addition to work experience certificates issued by any Govt. Organisation, work experience certificate issued by Public listed company having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, incorporated/ registered at least 5 years prior to the date of closing of tender, shall also be considered provided the work experience certificate has been issued by a person authorized by the Public listed company to issue such certificates.

In case tenderer submits work experience certificate issued by public listed company, the tenderer shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

1.3.13.2 Financial Eligibility Criteria: (ACS-1 dt. 14.07.2022)

<i>Criteria</i>		<i>Compliance Requirement</i>		<i>Documents</i>
<i>Requirement</i>		<i>Single Entity</i>	<i>Joint venture</i>	<i>Submission Requirements</i>
(i)	The Tenderer must have minimum avg. annual contractual turn over of	Must meet Requirement	Must meet requirement (As	Certificates/Audited balance sheets and or

	<p>V/N or V whichever is less. where</p> <p>V=Advertised value of tender in Crore of Rupees,</p> <p>N= No. of Years prescribed for completion of work for which have been invited.</p> <p><input type="checkbox"/> The Average Annual contractual shall be calculated as an average of total contractual payment in the previous three financial years, as per the audited balance sheet. However in case balance sheet of previous year is yet to be prepare /audited, the Audited balance sheet of fourth previous year shall be consider for calculating</p>		<p>per clause 1.3.32.15.2 of Preamble & General instructionsto Tenderers)</p>	<p>photo state of TDS certificates /Audited balance sheets clearly indicating the contractual amount received. All documents either original of photocopies should be attested by Notary.</p>
	<p>Average Annual Contractual Turn over.</p>			
	<p>The tenderer shall submit requisite information as per form 2B, along with copies of audited balance sheets dulycertified by the Chartered accountant/certificate from chartered accountant duly supported by audited balance sheet.</p>			

Note:

1. Contractual payments received by a Member in an earlier JV firm shall be reckoned only to extent of the concerned member's share in that JV Firm for the purpose of satisfying compliance of the above-mentioned financial eligibility criteria in tender for considerations.
2. In case the Tenderers is a partnership firm, the turn over etc shall be in the name of partnership firm only.

3. *In case a work is started prior to 07 (seven) years, ending last day of month previous to the one in which tender is invited, but completed in last 07 (seven) years, ending last day of month previous to the one in which tender is invited, the completed work shall be considered for fulfilment of credentials.*
4. *If a work is physically completed and completion certificate to this extent is issued by the concerned organization but final bill is pending, such work shall be considered to fulfilment of credentials.*
5. *The average annual contractual turnover shall be calculated as an average of "total contractual payments" in the previous three financial years, as per the audited balance sheet. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.*
6. *The tenderers shall submit requisite information as per Form No. 2B, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.*

1.3.13.3 Bid Capacity: The tender/technical bid will be evaluated based on bid capacity formula detailed as Form No. 23.

The bid capacity is required to be submitted/uploaded with tender/bid when tender value is more than Rs.20.0 Crores. The tender/technical bid will be evaluated based on bid capacity formula detailed in **Form No.23**.The tenderer/bidder shall have to submit/upload requisite information in a proforma (tabular form) as per **Form 23 A,B &C** with all supporting documents. In case, the tenderer/bidder failed to submit the above statement & supporting documents along with tender/bid, their offer shall be considered as incomplete and shall be **SUMMARILY REJECTED**.

Note:

- (a) *The Tenderer(s) shall furnish the details of existing commitments and balance amount of ongoing works with tenderer as per Form for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of inviting of tender. In case of no works in hand, a 'NIL' statement should be furnished. This statement should be submitted duly verified by Chartered Accountant.*
- (b) *In case of JV, the tenderer(s) must furnish the details of existing commitments and balance amount of ongoing works with each member of JV as per Form 11 for statement of all works in progress and also the works which are awarded to tenderer but yet not started upto the date of inviting of tender. In case of no works in hand, a 'NIL' statement should be furnished. This statement should be submitted duly verified by Chartered Accountant.*
- (c) *Value of a completed work/work in progress/work awarded but yet not started for a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above-mentioned bid capacity in the tender under consideration.*
- (d) *The arithmetic sum of individual "bid capacity" of all the members shall be taken as JV's "bid capacity".*

- (e) *In case, the tenderer/s failed to submit the above statement along with offer, their/his offer shall be considered as incomplete and will be rejected summarily.*
- (f) *The available bid capacity of tenderer shall be assessed based on the details submitted by the tenderer. In case, the available bid capacity is lesser than estimated cost of work put to tender, his offer shall not be considered even if he has been found eligible in other eligibility criteria/tender requirement.*

Explanation for Para 1.3.13 of the Preamble and General Instruction to Tenderers Part I, Chapter III including Para 1.3.13.1 to 1.3.13.3 – Eligibility Criteria:

1. Substantially Completed Work means an ongoing work in which payment equal to or more than 90% of the present contract value (excluding the payment made for adjustment of Price variation (PVC), if any) has been made to the contractor in that ongoing contract and no proceedings of termination of contract on Contractor's default has been initiated. The credential certificate in this regard should have been issued not prior to 60 days of date of invitation of present tender.
2. In case a work is started prior to 07 (seven) years, ending last day of month previous to the one in which tender is invited, but completed in last 07 (seven) years, ending last day of month previous to the one in which tender is invited, the completed work shall be considered for fulfilment of credentials.
3. If a work is physically completed and completion certificate to this extent is issued by the concerned organization but final bill is pending, such work shall be considered for fulfilment of credentials
4. In case of completed work, the value of final bill (gross amount) including the PVC amount (if paid) shall be considered as the completion cost of work. In case final bill is pending, only the total gross amount already paid including the PVC amount (if paid) shall be considered as the completion cost of work.
In case of substantially completed work, the total gross amount already paid including the PVC amount (if paid), as mentioned in the certificate, shall be considered as the cost of substantially completed work.
5. If a bidder has successfully completed a work as subcontractor and the work experience certificate has been issued for such work to the subcontractor by a Govt. Organization or public listed company as defined in Note for Item 1.3.13.1 Para 1.3.13 of the Preamble and General Instruction to Tenderers Part I, Chapter III, the same shall be considered for the purpose of fulfilment of credentials.
6. In case a work is considered similar in nature for fulfilment of technical credentials, the overall cost including the PVC amount (if paid) of that completed work or substantially completed work, shall be considered and no separate evaluation for each component of that work shall be made to decide eligibility.

7. In case of newly formed partnership firm, the credentials of individual partners from previous propriety firm(s) or dissolved previous partnership firm(s) or split previous partnership firm(s), shall be considered only to the extent of their share in previous entity on the date of dissolution / split and their share in newly formed partnership firm. For example, a partner A had 30% share in previous entity and his share in present partnership firm is 20%. In the present tender under consideration, the credentials of partner A will be considered to the extent of $0.3 \times 0.2 \times$ Value of the work done in the previous entity. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.
8. In case of existing partnership firm, if any one or more partners quit the partnership firm, the credentials of remaining partnership firm shall be re-worked out i.e., the quitting partner(s) shall take away his credentials to the extent of his share on the date of quitting the partnership firm(e.g. in a partnership firm of partners A, B & C having share 30%, 30% & 40% respectively and credentials of Rs 10 crore; in case partner C quits the firm, the credentials of this partnership firm shall remain as Rs 6 crore). For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deed(s), dissolution deed(s) and proof of surrender of PAN No.(s) in case of dissolution of partnership firm(s) etc.
9. In case of existing partnership firm if any new partner(s) joins the firm without any modification in the name and PAN/TAN no. of the firm, the credentials of partnership firm shall get enhanced to the extent of credentials of newly added partner(s) on the same principles as mentioned in item 6 above. For this purpose, the tenderer shall submit along with his bid all the relevant documents which include copy of previous partnership deeds, dissolution/splitting deeds and proof of surrender of PAN No.(s) in case of dissolution of partnership firm etc.
10. Any partner in a partnership firm cannot use or claim his credentials in any other firm without leaving the partnership firm i.e., In a partnership firm of A&B partners, A or B partner cannot use credentials of partnership firm of A&B partners in any other partnership firm or propriety firm without leaving partnership firm of A&B partners.
11. In case a partner in a partnership firm is replaced due to succession as per succession law, the proportion of credentials of the previous partner will be passed on to the successor.
12. If the percentage share among partners of a partnership firm is changed, but the partners remain the same, the credentials of the firm before such modification in the share will continue to be considered for the firm as it is without any change in their value. Further, in case a partner of partnership firm retires without taking away any credentials from the firm, the credentials of partnership firm shall remain the same as it is without any change in their value.
13. In a partnership firm "AB" of A&B partners, in case A also works as propriety firm "P" or partner in some other partnership firm "AX", credentials of A in propriety firm "P" or in other partnership firm "AX" earned after the date of becoming a partner of the firm AB shall not be added in partnership firm AB.
14. In case a tenderer is LLP, the credentials of tenderer shall be worked out on above lines similar to a partnership firm.

15. In case company A is merged with company B, then company B would get the credentials of company A also.]

1.3.13.4 Tenderer Credentials:

Documents testifying tenderer previous experience and financial status should be produced along with the tender.

The tenderer shall provide satisfactory evidence in support of their technical and financial eligibility, which are acceptable to DFCCIL, as follows: -

- (a) For Technical eligibility criteria, the details will be submitted in Form No.2A along with supporting documents.
- (b) For Financial eligibility criteria, the details will be submitted in Form No.2B along with supporting documents.

The following will be applicable for evaluating the eligibility:

The tenderer shall be considered disqualified/in-eligible if:

- i. The Tenderer or any of its partners and/or subcontractors included in the tender has been banned for business with Ministry of Railways/DFCCIL along with any of its attached and subordinate offices through an order issued by Ministry of Railways as per list available on Website (<http://www.indianrailways.gov.in> /railway board) of Railway Board pertaining to banning of Business, with the banning being valid as on the date of submission the Tender. Certificates and testimonials regarding contracting experience for the type of job for which tender is invited with list of works carried out in the past.
- ii. The Tenderer or any of its partners has suffered bankruptcy / insolvency or it is in the process of winding-up or there is a case of insolvency pending before any Court on the deadline of submission of application. Audited Balance Sheet duly certified by the Chartered Accountant regarding contractual payments received in the past.
- iii. A copy of certificate stating that they are not liable to be disqualified and all their statements/documents submitted along with bid are true and factual. Standard format of the certificate to be submitted by the bidder is enclosed as Form No. 22. Non submission of a copy of certificate by the bidder shall result in summarily rejection of his/their bid. It shall be mandatorily incumbent upon the tenderer to identify, state and submit the supporting documents duly self-attested / digitally signed by which they/he are/is qualifying the Qualifying Criteria mentioned in the Tender Document.
- iv. For the purposes of conversion of foreign currency to Indian rupees (INR) Bank Currency (BC) selling exchange rates as published by State Bank of India on the date 28 days prior to date of submission of tender shall be used. For few of the currencies where BC selling rates are not published by SBI or reserve bank of India, the exchange rate may be obtained from website- <http://www.oanda.com/currency/historical-rates> or <http://www.xe.com>.The list of

- personnel / organization on hand and proposed to be engaged for the tendered work. Similarly list of Plant & Machinery available on hand and proposed to be inducted and hired for the tendered work.
- v. For the purpose of evaluation of proposals, all values given in INR in eligible qualification criteria and the values provided by the applicants in the proposal in the currencies other than INR shall be converted into one i.e. INR as per exchange rate mentioned in para (vi) above.
- vi. The DFCCIL reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the DFCCIL, make available all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by the DFCCIL shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the DFCCIL there under.
- vii. (a) In case of any information submitted by tenderer is found to be false, forged or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the tender Bid Security besides banning of business for a period of up to five years.
(b) In case of any information submitted by tenderer is found to be false, forged or incorrect after the award of contract, the contract shall be terminated. Bid Security, Performance Guarantee and Security Deposit available with the DFCCIL shall be forfeited. In addition, other dues of the contractor, if any, under this contract shall be forfeited and agency shall be banned for doing business for a period of up to five years.
- Non-compliance with any of the conditions set forth therein above is liable to result in the tender being rejected.

1.3.13.5 System of Verification of Tenderer's Credential:

1. For the works tenders, it has been decided to adopt the certificate based (Form self- attested is required. Signature, Stamp on Each Page). The tenderer shall submit along with the tender document, documents in support of his/their claim to fulfil the eligibility criteria as mentioned in the tender document. Each page of the copy of documents/certificates in support of certificates submitted by the tenderer shall be self- attested/ digitally signed by the tenderer or authorized representative of the tendering firm. Self –attestation shall include signature, stamp and date (on each page).
2. The tenderers shall submit a certificate stating that they are not liable to be disqualified and all their statements/documents submitted along with bid are true and factual. Standard format of the certificate to be submitted by the bidder is enclosed as Form-22. **Non submission of a certificate (Form No. 22) by the bidder shall result in summarily rejection of his/their bid.** And it shall be mandatorily incumbent upon the Tenderer to identify state and submit the supporting documents duly self-attested by which they/he is qualifying the Qualifying Criteria mentioned in the Tender Document. It will not be obligatory on the part of Tender Committee to scrutinize beyond the submitted document of tenderer as far as his qualification for the tender is concerned.
3. The DFCCIL reserves the right to verify all statements, information and documents submitted by the bidder in his tender offer, and the bidder shall, when so required by the DFCCIL, make available

all such information, evidence and documents as may be necessary for such verification. Any such verification or lack of such verification, by the DFCCIL shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any right of the DFCCIL

1.3.14 Period of Completion

The entire work is required to be completed in all respects within the period as specified in NIT of this Tender. Time is the essence of contract. The contractor shall be required to maintain steady and regular progress to the satisfaction of the Engineer to ensure that the work will be completed in all respects within the stipulated time.

1.3.15 If the Tenderer/s deliberately gives any wrong information about credentials / documents in his/their tenders and thereby create(s) circumstances for acceptance of his/their tender, DFCCIL reserves the right to reject such tender at any stage, besides, shall suspend business with such tenderer. The EMD of such tenderers shall also be forfeited.

1.3.16 Quantum of work and materials:

The indicative schedule of quantities of various items of works shall be available at www.ireps.gov.in.

1.3.17 Employer not bound to accept any tender:

The employer shall not be bound to accept the lowest or any tender or to assign any reason for non-acceptance or rejection of a tender. The employer reserves the right to accept any tender in respect of the whole or any portion of the work specified in the tender papers or to reduce the work or to accept any tender for less than the tendered quantities without assigning any reason whatsoever.

1.3.18 Schedule of Prices

The Summary of prices and schedule of prices shall be available at www.ireps.gov.in.

1.3.19 Performance Guarantee: Refer relevant clause 16. (4) of GCC.

1.3.20 The tenderer shall furnish information for making payment through ECS/ NEFT / RTGS (Tender Form No. 8 placed at Part IV of the tender documents).

1.3.21 Negotiation:

Should DFCCIL decide to negotiate with a view to bring down the rates, the tenderer called for negotiations should furnish the following form of declaration before commencement of negotiations?

"I..... Do declare that in the event of failure of Contemplated negotiations relating to Tender No..... dated.....my original tender shall remain open for acceptance on its original terms and conditions,"

1.3.22 Pre-Bid Meeting: - Deleted.

1.3.23 Site Inspection:

Tenderers are requested to inspect the site and carry out careful examination to satisfy themselves as to the nature of work involved and facilities available at the site. They should note carefully all the existing structures and those under construction through other agencies. They should also study the suitability of utilizing the different equipment and the machinery that they intend to use for the execution of the work. The tenderers should also select suitable sites for the purpose of locating their store yard, laboratory, staff quarters etc.

1.3.24 No form C & D shall be issued to the contractor for this work.

1.3.25 Preliminary examination of bids

- a) The DFCCIL shall examine the bids to determine whether they are complete, whether any computational errors have been made, whether the documents have been properly signed and whether the bids are generally in order.
- b) Arithmetical errors shall be rectified on the following basis if found. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between subtotals and the total price, the unit or subtotal price shall prevail, and the total price shall be corrected.
- c) The rates should be quoted in figures as well as in words. If there is variation between rates quoted in figures and in words, the rate quoted in „words“ shall be taken as correct. If more than one or improper rates are tendered for the same item, the tender is liable to be rejected.
- d) Prior to the detailed evaluation, DFCCIL shall determine whether each bid is of acceptable quality, is generally complete and is substantially responsive to the bidding documents. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions and specifications of the bidding documents without material deviations, objections, conditionality or reservation. A material deviation, objections, conditionality or reservation is one:
 - i. That affects in any substantial way the scope, quality or Performance of the contract.
 - ii. That limits in any substantial way, inconsistent with the bidding documents, the DFCCIL’s rights or the successful Bidder’s obligations under the contracts; or
 - iii. Whose rectification would unfairly affect the competitive position of other Bidders who are presenting substantially responsive bids.
- e) If a bid is not substantially responsive, it shall be rejected by the DFCCIL.
- f) In case of tenders containing any conditions or deviations or reservations about contents of tender document. DFCCIL can summarily reject such tender.

1.3.26 Evaluation and comparison of tenders.

In case of open tenders, bids, which are determined as substantially responsive, shall be evaluated based on criteria as given in Eligibility Criteria” and as given in Notice Inviting E-Tender. The tenderer must submit all necessary authentic data with necessary supporting certificates of the various items of evaluation criteria failing which his tender is liable to be rejected.

1.3.27 Canvassing

No tenderer is permitted to canvass to DFCCIL on any matter relating to this tender. Any tenderer found doing so may be disqualified and his bid may be rejected.

1.3.28 Award of Contract

1. DFCCIL shall notify the successful tenderer in writing by a Registered Letter/Courier/Speed Post/Email or through bearer that his tender has been accepted.
2. Letter of Acceptance after it is signed by the contractor in token of his acceptance shall constitute a legal and binding contract between DFCCIL and the contractor till such time the contract agreement is signed.

1.3.29 Understanding and Amendments of Tender Documents:

1. The bidder must own all responsibilities and bear all cost for obtaining all the information including risks, contingencies & other circumstances in execution of the work. It shall also carefully read and understand all its obligations & liabilities given in tender documents.
2. The bidder is advised to visit and examine the site where the work is to be executed and its surroundings or other areas as deemed fit by the bidder and should obtain at his own cost all information that may be necessary for preparing the bid and execution of the contract. The cost of visiting the site and collecting relevant data shall be at the bidder's own expenses. It is a condition of the tender that the tenderer is deemed to have visited the site and satisfied himself with all the conditions prevailing including any difficulties for executing the work.
3. At any time prior to the deadline for submission of bids, DFCCIL may for any reason whether at its own initiative or in response to any request by any prospective bidder amend the bidding documents by issuing Amendment, which shall be part of the Tender documents.
4. DFCCIL may at its discretion extend the deadline for submission of the bids at any time before the time of submission of the bids.

1.3.30 Provision for medium & small enterprises (MSE):

As mandated by Railway Board Letter No. 2010/RS (G)/363/1 dated 05.07.2012 (RBS No. 4/2012), in compliance to public procurement policy, following provisions are included for Medium & Small Enterprises (MSE) in the tender document

1. Tender sets shall be provided free of cost to MSEs registered with the listed agencies for the item tendered.
2. MSEs registered with the listed agencies for the item tendered will be exempted from payment of Earnest Money.
3. (1) MSEs who are interested in availing themselves of these benefits will enclose with their offer the proof of their being MSE registered with any of the agencies mentioned in the notification of Ministry of MSME indicated below:
 - (i) District industries Centres
 - (ii) Khadi and Village Industries Commission
 - (iii) Khadi and Village Industries Board
 - (iv) Coir Board

- (v) National Small Industries Corporation
- (vi) Directorate of Handicraft and Handloom
- (vii) Any other body specified by Ministry of MSME.

(2) The MSEs must also indicate the terminal validity date of their registration.

Falling (I) & (II) above, such offers will not be liable for consideration of benefits detailed in MSE notification of Government of India dated 23.03.2012.

4. Definition of MSEs owned by SC/ST is as give below:
 - (i) In case of proprietary MSE, proprietors (s) shall be SC/ST.
 - (ii) In case of partnership MSE, the SC/ST partners shall be holding at least 51% Shares in the unit.
 - (iii) In case of Private Limited Companies at least 51% share shall be held by SC/ST Promoters.
5. All bidders registered under Micro, Small and Medium Enterprises (MSMEs) shall have to satisfy the eligibility criteria at par with other bidders. There shall not be any relaxation in eligibility criteria/tender process or other tender requirements and L-1 price.
6. The above facilities shall not be applicable for the items for which they are not registered.
7. The tenderer (s) shall submit copy of current and valid MSMEs registration certificate inclusive of all the pages showing the category of entrepreneur – whether the registered firm is owned by General or SC/ST entrepreneurs, monetary limit of their registration for the items tendered to avail the benefits under the policy. The MSMEs shall also submit a copy of “Entrepreneur’s Memorandum (Part-II)” of the concerned district centre where the unit is established.
8. **Registration of Udyog Aadhar Memorandum (UAM):** All Micro, Small and Medium Enterprises (MSMEs) bidders are required to declare UAM Number on CPPP /www.ireps.gov.in failing which such bidders will not be able to enjoy the benefits as per Public Procurement Policy for tenders invited electronically through CPPP /www.ireps.gov.in.

1.3.31 Employment/Partnership etc. of Retired Railway Employees:

- (a) Should a tenderer
 - i) be a retired Engineer of the gazetted rank or any other gazetted officer working before his retirement, whether in the executive or administrative capacity or whether holding a pensionable post or not, in the Engineering or any other department of any of the railways owned and administered by the MD/DFCCIL for the time being, OR
 - ii) being partnership firm / joint venture (JV) / registered society / registered trust etc have as one of its partners a retired Engineer of the gazetted rank or any other gazetted officer working before his retirement, OR
 - iii) being an incorporated company have any such retired Engineer of the gazetted rank or any other gazetted officer working before his retirement as one of its directors, AND

in case where such Engineer or officer had not retired from government service at least 1 year prior to the date of submission of the tender, THEN

the tenderer will give full information as to the date of retirement of such Engineer or gazetted officer from the said service and as to whether permission for taking such contract, or if the Contractor be a partnership firm or an incorporated company, to become a partner or director as the case may be, has been obtained by the tenderer or the Engineer or officer, as the case may be from the MD/DFCCIL or any officer, duly authorized by him in this behalf, shall be clearly stated in writing at the time of submitting the tender.

- (b) In case, upon successful award of contract, should a tenderer depute for execution of the works under or to deal matters related with this contract, any retired Engineer of gazette rank or retired gazetted officer working before his retirement in the Engineering or any other department of any of the railways owned and administered by the MD/DFCCIL for the time being, and now in his employment, then the tenderer will ensure that retired Engineer or retired gazetted officer had retired from government service at least 1 year prior to the date of his employment with tenderer and in case he had retired from service within a year then he possesses the requisite permission from the MD/DFCCIL or any officer, duly authorized by him in this behalf, to get associated with the tenderer.
- (c) Should a tenderer or Contractor being an individual, have member(s) of his family or in the case of partnership firm/ company / joint venture (JV) / registered society / registered trust etc. one or more of his partner(s)/shareholder(s) or member(s) of the family of partner(s)/shareholder(s) having share of more than 1% in the tendering entity employed in gazetted capacity in the Engineering or any other department of the railway, then the tenderer at the time of submission of tender, will inform the authority inviting tenders the details of such persons.

Note: - If information as required above has not been furnished, contract is liable to be dealt in accordance with provision of clause 62 of Standard General Condition of contract.

1.3.32 JOINT VENTURE (JV) IN WORKS TENDERS

(Participation of Joint Venture firms shall be applicable for tenders of value more than Rs. 10 Crore (Rupees Ten Crore) Each As per Railway Board's letter no. 2002/CE-I/CT/37JV. Pt-VIII dated 14.12.2012)

Participation of Joint Venture (JV) in Works Tender: This Para shall be applicable for works tenders wherein tender documents provide for the same.

1.3.32.1 Separate identity/name shall be given to the Joint Venture.

1.3.32.2 Number of members in a JV shall not be more than three, if the work involves only one department (say Civil or S&T or Electrical or Mechanical) and shall not be more than five, if the work involves more than one Department. One of the members of the JV shall be its Lead Member who shall have a majority (at least 51%) share of interest in the JV. The other members shall have a share of not less than 20% each in case of JV with up to three members and not less than 10% each in case of JV with more than three members. In case of JV with

foreign member(s), the Lead Member has to be an Indian firm/company with a minimum share of 51%.

- 1.3.32.3** A member of JV shall not be permitted to participate either in individual capacity or as a member of another JV in the same tender.
- 1.3.32.4** The tender form shall be purchased and submitted only in the name of the JV and not in the name of any constituent member. The tender form can however be submitted by JV or any of its constituent member or any person authorized by JV through Power of Attorney to submit tender.
- 1.3.32.5** Bid Security shall be submitted by JV or authorized person of JV either as:
- (i) Cash through e-payment gateway or as mentioned in tender document, or
 - (ii) Bank Guarantee bond either in the name of JV, or in the name of all members of JV as per MOU irrespective of their share in the JV if the JV has not been constituted legally till the date of submission of tender.
- 1.3.32.6** A copy of Memorandum of Understanding (MoU) duly executed by the JV members on a stamp paper, shall be submitted by the JV along with the tender. The complete details of the members of the JV, their share and responsibility in the JV etc. particularly with reference to financial, technical and other obligations shall be furnished in the MoU.
- 1.3.32.7** Once the tender is submitted, the MoU shall not normally be modified / altered / terminated during the validity of the tender. In case the tenderer fails to observe/comply with this stipulation, the full Bid Security shall be liable to be forfeited.
- 1.3.32.8** Approval for change of constitution of JV shall be at the sole discretion of the DFCCIL. The constitution of the JV shall not normally be allowed to be modified after submission of the bid by the JV, except when modification becomes inevitable due to succession laws etc., provided further that there is no change in qualification of minimum eligibility criteria by JV after change of composition. However, the Lead Member shall continue to be the Lead Member of the JV. Failure to observe this requirement would render the offer invalid.
- 1.3.32.9** Similarly, after the contract is awarded, the constitution of JV shall not be normally allowed to be altered during the currency of contract except when modification become inevitable due to succession laws etc. and minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract conditions.
- 1.3.32.10** On award of contract to a JV, a single Performance Guarantee shall be submitted by the JV as per tender conditions. All the Guarantees like Performance Guarantee, Bank Guarantee for Mobilization Advance, Machinery Advance etc. shall be accepted only in the name of the JV and no splitting of guarantees amongst the members of the JV shall be permitted.

1.3.32.11 On issue of LOA (Letter of Acceptance), the JV entity to whom the work has been awarded, with the same shareholding pattern as was declared in the MOU/JV Agreement submitted along with the tender, shall be got registered before the Registrar of the Companies under 'The Companies Act -2013' (in case JV entity is to be registered as Company) or before the Registrar/Sub-Registrar under the 'The Indian Partnership Act, 1932' (in case JV entity is to be registered as Partnership Firm) or under 'The LLP Act 2008' (in case JV entity is to be registered as LLP). A separate PAN shall be obtained for this entity. The documents pertaining to this entity including its PAN shall be furnished to the DFCCIL before signing the contract agreement for the work. In case the tenderer fails to observe/comply with this stipulation within 60 days of issue of LOA, contract is liable to be terminated. In case contract is terminated DFCCIL shall be entitled to forfeit the full amount of the Bid Security and other dues payable to the Contractor under this contract. The entity so registered, in the registered documents, shall have, inter-alia, following Clauses:

- (i) Joint and Several Liability - Members of the entity to which the contract is awarded, shall be jointly and severally liable to the DFCCIL for execution of the project in accordance with General and Special Conditions of Contract. The members of the entity shall also be liable jointly and severally for the loss, damages caused to the DFCCIL during the course of execution of the contract or due to non-execution of the contract or part thereof.
- (ii) Duration of the Registered Entity - It shall be valid during the entire currency of the contract including the period of extension, if any and the maintenance period after the work is completed.
- (iii) Governing Laws - The Registered Entity shall in all respect be governed by and interpreted in accordance with Indian Laws.

1.3.32.12 Authorized Member - Joint Venture members in the JV MoU shall authorize Lead member on behalf of the Joint Venture to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to this authorized member of the JV.

1.3.32.13 No member of the Joint Venture shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the DFCCIL in respect of the said tender/contract.

1.3.32.14 Documents to be enclosed by the JV along with the tender:

- (i) In case one or more of the members of the JV is/are partnership firm(s), following documents shall be submitted:
 - (i) A notarized copy of the Partnership Deed or a copy of the Partnership deed registered with the Registrar.

- (ii) A copy of consent of all the partners or individual authorized by partnership firm, to enter into the Joint Venture Agreement on a stamp paper,
 - (iii) A notarized or registered copy of Power of Attorney in favour of the individual to sign the MOU/JV Agreement on behalf of the partnership firm and create liability against the firm.
 - (iv) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by DFCCIL or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.
- (ii) In case one or more members is/are Proprietary Firm or HUF, the following documents shall be enclosed:
- (i) A copy of notarized affidavit on Stamp Paper declaring that his Concern is a proprietary Concern and he is sole proprietor of the Concern OR he who is signing the affidavit on behalf of HUF is in the position of 'Karta' of Hindu Undivided Family (HUF) and he has the authority, power and consent given by other members to act on behalf of HUF.
- (iii) In case one or more members of the JV is/are companies, the following documents shall be submitted:
- (i) A copy of resolutions of the Directors of the Company, permitting the company to enter into a JV agreement,
 - (ii) The copies of MOA (Memorandum of Association) / AOA (Articles of Association) of the company
 - (iii) A copy of Certificate of Incorporation
 - (iv) A copy of Authorization/copy of Power of Attorney issued by the Company (backed by the resolution of Board of Directors) in favour of the individual, to sign the tender, sign MOU/JV Agreement on behalf of the company and create liability against the company.
- (iv) In case one or more members of the JV is/are LLP firm/s, the following documents shall be submitted:
- (i) A copy of LLP Agreement.
 - (ii) A copy of Certificate of Incorporation of LLP.
 - (iii) A copy of resolution passed by partners of LLP firm, permitting the Firm to enter into a JV agreement.
 - (iv) A copy of Authorization /copy of Power of Attorney issued by the LLP firm (backed by resolution passed by the Partners) in favour of the individual, to sign

the tender and/or sign the MOU/ JV agreement on behalf of the LLP and create liability against the LLP.

- (v) An undertaking by all partners of the LLP that they are not blacklisted or debarred by DFCCIL/Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any firm/LLP or JV in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the contract liable for determination under Clause 62 of the Standard General Conditions of Contract.
- (v) In case one or more members of the JV is/are Society/s or Trust/s, the following documents shall be submitted:
- (i) A copy of Certificate of Registration
 - (ii) A copy of Memorandum of Association of Society/Trust Deed
 - (iii) A copy of Rules & Regulations of the Society
 - (iv) A copy of Power of Attorney, in favour of the individual to sign the tender documents and create liability against the Society/Trust.
- (vi) All other documents in terms of Para 1.3.13 of the Preamble and General Instruction to Tenderers, Part I, Chapter III above.

1.3.32.15 Credentials & Qualifying Criteria: Technical, financial eligibility and Bid capacity of the JV shall be adjudged based on satisfactory fulfilment of the following criteria:

- (i) Technical Eligibility Criteria ('a' or 'b' mentioned hereunder):
- (a) **For Works without composite components**
 The technical eligibility for the work as per para 1.3.13.1 Preamble & General Instruction to tenderer above, shall be satisfied by either the 'JV in its own name & style' or 'Lead member of the JV'.
 Each other (non-lead) member(s) of JV, who is/ are not satisfying the technical eligibility for the work as per para 1.3.13.1 Preamble & General Instruction to tenderer above, shall have technical capacity of minimum 10% of the cost of work i.e., each non-lead member of JV member must have satisfactorily completed or substantially completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 10% of advertised value of the tender.
- (b) **For works with composite components**
 The technical eligibility for major component of work as per para 1.3.13.1 Preamble & General Instruction to tenderer above, shall be satisfied by either the 'JV in its own name & style' or 'Lead member of the JV' and technical eligibility for other component(s) of work as per para 1.3.13.1 Preamble & General Instruction to tenderer above, shall be satisfied by either the 'JV in its own name & style' or 'any member of the JV'.

Each other (non-lead) member(s) of JV, who is/ are not satisfying the technical eligibility for any component of the work as per para 1.3.13.1 Preamble & General Instruction to tenderer above, shall have technical capacity of minimum 10% of the cost of any component of work mentioned in technical eligibility criteria. i.e., each other (non-lead) member of must have satisfactorily completed or substantially completed during the last 07 (seven) years, ending last day of month previous to the one in which tender is invited, one similar single work for a minimum of 10% of cost of any component of work mentioned in technical eligibility criteria.

Note for Para 1.3.32.15.(i):

- (a) The Major component of the work for this purpose shall be the component of work having highest value. In cases where value of two or more component of work is same, any one work can be classified as Major component of work.
- (b) Value of a completed work done by a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above-mentioned technical eligibility criteria in the tender under consideration.

(ii) Financial Eligibility Criteria

The JV shall satisfy the requirement of “Financial Eligibility” mentioned at para 1.3.13.2 above. The “financial capacity” of the lead member of JV shall not be less than 51% of the financial eligibility criteria mentioned at para 1.3.13.2 above.

The arithmetic sum of individual “financial capacity” of all the members shall be taken as JV’s “financial capacity” to satisfy this requirement.

Note: Contractual payment received by a Member in an earlier JV shall be reckoned only to the extent of the concerned member’s share in that JV for the purpose of satisfying compliance of the above-mentioned financial eligibility criteria in the tender under consideration.

(iii) Bid Capacity

The JV shall satisfy the requirement of “Bid Capacity” requirement mentioned at para 1.3.13.3 above. The arithmetic sum of individual “Bid capacity” of all the members shall be taken as JV’s “Bid capacity” to satisfy this requirement.

1.3.33 Participation of Partnership Firms in works tenders:

- 1.3.33.1** The Partnership Firms participating in the tender should be legally valid under the provisions of the Indian Partnership Act.
- 1.3.33.2** The partnership firm should have been in existence or should have been formed prior to submission of tender. Partnership firm should have either been registered with the Registrar

or the partnership deed should have been notarized as per the Indian Partnership Act, prior to submission of tender.

- 1.3.33.3** Separate identity / name should be given to the partnership firm. The partnership firm should have PAN / TAN number in its own name and PAN / TAN number in the name of any of the constituent partners shall not be considered. The valid constituents of the firm shall be called partners.
- 1.3.33.4** Once the tender has been submitted, the constitution of the firm shall not normally be allowed to be modified / altered / terminated during the validity of the tender as well as the currency of the contract except when modification becomes inevitable due to succession laws etc., in which case prior permission should be taken from DFCCIL/Railway and in any case the minimum eligibility criteria should not get vitiated. The re-constitution of firm in such cases should be followed by a notary certified Supplementary Deed. The approval for change of constitution of the firm, in any case, shall be at the sole discretion of the DFCCIL /Railways and the tenderer shall have no claims what-so-ever. Any change in the constitution of Partnership firm after submission of tender shall be with the consent of all partners and with the signatures of all partners as that in the Partnership Deed. Failure to observe this requirement shall render the offer invalid and full Bid Security shall be forfeited.

If any Partner/s withdraws from the firm after submission of the tender and before the award of the contract, the offer shall be rejected and Bid Security of the tenderer will be forfeited. If any new partner joins the firm after submission of tender but prior to award of contract, his / her credentials shall not qualify for consideration towards eligibility criteria either individually or in proportion to his share in the previous firm. In case the tenderer fails to inform DFCCIL/Railway beforehand about any such changes / modification in the constitution which is inevitable due to succession laws etc. and the contract is awarded to such firm, then it will be considered a breach of the contract conditions liable for determination of the contract under Clause 62 of the Standard General Conditions of Contract.

- 1.3.33.5** A partner of the firm shall not be permitted to participate either in his individual capacity or as a partner of any other firm in the same tender.
- 1.3.33.6** The tender form shall be submitted only in the name of partnership firm. The Bid Security shall be submitted by partnership firm. The Bid Security submitted in the name of any individual partner or in the name of authorized partner (s) shall not be considered.
- 1.3.33.7** On issue of Letter of Acceptance (LOA) to the partnership firm, all the guarantees like Performance Guarantee, Guarantee for various Advances to the Contractor shall be submitted only in the name of the partnership firm and no splitting of guarantees among the partners shall be acceptable.
- 1.3.33.8** On issue of Letter of Acceptance (LOA), contract agreement with partnership firm shall be executed in the name of the firm only and not in the name of any individual partner.

1.3.33.9 In case the Letter of Acceptance (LOA) is issued to a partnership firm, the following undertakings shall be furnished by all the partners through a notarized affidavit, before signing of contract agreement.

(a) Joint and several liabilities:

The partners of the firm to which the Letter of Acceptance (LOA) is issued, shall be jointly and severally liable to the DFCCIL/Railway for execution of the contract in accordance with General and Special Conditions of the Contract. The partners shall also be liable jointly and severally for the loss, damages caused to the DFCCIL / Railway during the course of execution of the contract or due to non-execution of the contract or part thereof.

(b) Duration of the partnership deed and partnership firm agreement:

The partnership deed/partnership firm agreement shall normally not be modified/alterd/terminated during the currency of contract and the maintenance period after the work is completed as contemplated in the conditions of the contract. Any change carried out by partners in the constitution of the firm without permission of DFCCIL, shall constitute a breach of the contract, liable for determination of the contract under Clause 62 of the Standard General Conditions of Contract.

(c) Governing laws:

The partnership firm agreement shall in all respect be governed by and interpreted in accordance with the Indian laws.

(d) No partner of the firm shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other partner/s and that of the DFCCIL/Railway.

1.3.33.10 The tenderer shall clearly specify that the tender is submitted on behalf of a partnership firm. The following documents shall be submitted by the partnership firm, with the tender:

- (i) A notarized copy of the Partnership Deed or a copy of the Partnership deed registered with the Registrar.
- (ii) A notarized or registered copy of Power of Attorney in favour of the individual to tender for the work, sign the agreement etc. and create liability against the firm.
- (iii) An undertaking by all partners of the partnership firm that they are not blacklisted or debarred by DFCCIL/Railways or any other Ministry / Department of the Govt. of India from participation in tenders / contracts as on the date of submission of bids, either in their individual capacity or in any

firm/LLP in which they were / are partners/members. Any Concealment / wrong information in regard to above shall make the bid ineligible or the contract shall be determined under Clause 62 of the Standard General Conditions of Contract.

- (iv) All other documents in terms of Para 1.3.13 of the Preamble and General Instruction to Tenderers Part I, Chapter III.

1.3.33.11 Evaluation of eligibility of a partnership firm:

Technical and financial eligibility of the firm shall be adjudged based on satisfactory fulfilment of the eligibility criteria laid down in Para 1.3.13 of the Preamble and General Instruction to Tenderers Part I, Chapter III.

1.3.34 CONFLICT OF INTEREST

- 1.1. DFCCIL Administration considers “**Conflict of Interest**”; to be a situation in which party has interests that could improperly influence the tendering process or that party’s Performance of official duties or Responsibilities, Contractual Obligations or Compliance of applicable laws and regulations. Any Tenderer(s), which in the opinion of DFCCIL Administration has or may have the likelihood of a conflict of interest, **shall be disqualified**. Without limiting the generality of the above, a Tenderer shall be considered to have a conflict of interest that affects the tendering process, if;
- (a) Such tenderer, its Member (In case of Partnership firm) or any of its Constituents and any other Tenderer for the same work, its Member or any of its constituents have cross ownership interest; provided that this disqualification shall not apply in case the direct or indirect ownership/Shareholding (of paid up and subscribed shares) of a Tenderer, its Member or any of its constituent in the other Tenderer, its Member or any of its constituent is less than 10% (Ten percent);or
 - (b) Such Tenderer or a Member of such Tenderer is also a member of another Tenderer for the same work; or
 - (c) Such Tenderer has the same authorized Signatory/ representative for a tender as any other Tenderer for the same work; or
 - (d) Such Tenderer, its Member or any of its Constituent has participated as consultant to DFCCIL in the preparation of any document, design or technical specifications for the same work; or
 - (e) If legal, financial or technical advisor of DFCCIL for the same work is or has been engaged by Tenderer, its Member or any of its Constituent in any manner for matters related to or incidental to the same work during or prior to the Tendering process up to the signing of Agreement; or
 - (f) Such Tenderer, its Member or any of its Constituent and the consultant of DFCCIL for the same work, its Member or any of its Constituent have cross ownership interest; provided that this disqualification shall not apply in cases the direct or indirect ownership/ shareholding (of its

paid up and subscribed shares) of a tenderer, its Member or any of its Constituents in the consultant of DFCCIL for this work, its Member or any of its Constituent, or vice versa, is less than 10% (ten percent); or

- (g) Such Tenderer, its Member or any Constituent thereof received or has received any direct or indirect subsidy, grant, concessional loan or subordinated debt from any other Tenderer for the same work, its Member or Constituent, or has provided any such subsidy, grant concessional loan or subordinated debt to any other Tenderer for the same work, its Member or any Constituent thereof; or
- (h) Such Tenderer, or any Constituent thereof, has a relationship with any other Tenderer for the same work, or any Constituent thereof, directly or through common third party/parties, that puts either or both of them in a position to have access to each other's' information about, or to influence the Tender of either or each other for the same work.

1.2. Disqualification specified under **Para 1.3.34(1.1) (a) to (h)** shall not apply to the Tenderer or its Member of both Public and Private unless and until such Tenderer or its Member is a Constituent of another Tenderer or its Member or DFCCIL Consultant for the same work.

- (i) Tenderer/ Each Member of the firm shall submit the following documents on the basis of which it has arrived at the conclusion that it does not have any Conflict of interest:
- (ii) List of Constituents along with their shareholding and registered office address;
- (iii) The details of each of shareholders holding more than 10% in the firm, each of its members and their Constituents;
- (iv) A chart showing the relationship of the Tenderer/Members of the firm with their respective constituents.
- (v) Notwithstanding anything contained herein above, DFCCIL may, after opening of Tender, seek a reconfirmation that there is no conflict of interest among the Tenderer, Members and / or Constituents of the Tenderer/ Members of the firm, within a period to be stipulated by DFCCIL. DFCCIL will also seek reconfirmation from its legal, financial or technical advisors that there is no conflict of interest with the tenderer.

1.3.35 FRAUD & CORRUPT PRACTICE

1.3.35.1 The Tenderer and their representative officers, employee, agents and advisors shall observe the highest standard of ethics during the tendering process and subsequent to the issue of the LOA during the substance of the Agreement. Notwithstanding anything to contrary contained herein or in the LOA or the Agreement, DFCCIL shall reject the Tender, Withdraw the LOA, or Terminate the Agreement, as the case may be, without being liable in any manner whatsoever to the selected Tenderer, if it determines that the selected Tenderer, as the case may be has directly or indirectly or through agent, engaged in corrupt practice, fraudulent

practice, Coercive practice, undesirable practice or restrictive practice in the Tendering process. In such an event, in addition to exercise of its right of Termination, DFCCIL shall forfeit and appropriate the contract security or Performance Guarantee as the case may be, as mutually agreed genuine pre- estimation compensation and damage payable to DFCCIL towards, inter alia, time, cost and effort of DFCCIL, without prejudice to any other right or remedy that may be available to DFCCIL hereunder or otherwise.

1.3.35.2 Without prejudice to the right of DFCCIL hereinabove and the rights and remedies which DFCCIL may have under the LOA or the Agreement, if the Tenderer/Contractor, as the case may be, is found by DFCCIL to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the tendering process, or after the issue of LOA or the execution of Agreement, **such Tenderer, Members and Contractor shall not be eligible to participate in any Tender issued by DFCCIL during a period of 02 (Two) years from the date such Tenderer, Member or Contractor, as the case may be, is found by DFCCIL to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.**

1.3.35.3 For the purposes of this clause, the following terms shall have the meanings hereinafter respectively assigned to them;

(i) **“Corrupt Practice”** means the offering, giving, receiving or soliciting, directly or indirectly of anything of value to influence the action of any person connecting with the Tendering process (for avoidance of doubt, offering employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of DFCCIL who is or has been associated in any manner, directly or indirectly with the Tendering process or the LOA or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from date such official resigns or retires from or otherwise ceases to be in the service of DFCCIL, shall be deemed to constitute influencing the actions of a person connected with the Tendering process),or

Engaging in any manner whatsoever, whether during Tendering process or after the issue of the LOA or after execution of Agreement, as the case may be, any person in respect of in respect of any matters relating to the work or the LOA or the Agreement, who at any time has been or is a legal, financial or technical advisor of DFCCIL in relation to any matter concerning to work.

(ii) **“Fraudulent practice”** means a misrepresentation or Omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Tendering process;

(iii) **“Coercive Practice”** means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person’s participation or action in the Tendering process;

(iv) **“Undesirable Practice”** means establishing contract with any person connected with or employed or engaged by DFCCIL and/ or the Ministry of Railways and / or any Ministry or

Department, Authority or body whether statutory or non-statutory that may be concerned or connected, in any manner whatsoever, with this work, with the objective of canvassing, lobbying, seeking intervention in or in any manner influencing or attempting to influence the Tendering process; or having a conflicted of interest; and

- (v) **“Restrictive Practice”** means forming a cartel or arriving at any understanding or arrangement among Tenderer with the objective of restricting or manipulating a full and fair completion in the tendering process.

1.3.36 CONFIDENTIALITY

Information relating to the examination, clarification, evolution and recommendation for the tenderer shall not be disclosed to any person, who is not officially concerned with the process or is not retained Professional Advisor advising DFCCIL, in relation to, or matter arising out of, or concerning the tendering process. DFCCIL will treat all information submitted/uploaded as part of the tender, in confidence and will require all those who have access to such material to treat the same in confidence. DFCCIL may not divulge any such information unless it is directed to do so by a Court of Law and/or any statutory entity that has the power under Law to require its disclosure.

1.3.37 MISCELLANEOUS

The Tendering process shall be governed by and construed in accordance with the Laws of India and the ***Courts at Maharashtra for Mumbai*** shall have exclusive jurisdiction over all disputes arising under pursuant to and/ or in connection with the Tendering process.

DFCCIL in its sole discretion and without incurring any obligation or liability reserves the right at any time to;

- (i) Suspend or cancel the Tendering process and /or amend and/ or Supplement the Tendering process or modify the dates or other terms & condition relating thereto;
- (ii) Consult with any Tenderer in order to receive clarifications or further information;
- (iii) Retain any information and /or evidence submitted to DFCCIL by, on behalf of, and/ or in relation to any Tenderer, and /or.
- (iv) Independently verify, disqualify, reject and/ or accept any and all submission or other information and/ or evidence submitted by or on behalf of any tenderer.

1.3.37.1 No assignment, Sale, Transfer, Conveyance of the work shall be permitted except as otherwise expressly provided in the tender documents. Any breach of this condition shall lead to rejection of the Tender and /or termination of Agreement.

1.3.37.2 For the sake of clarity, the Tenderer (s) may note that in case there are any obligation(s) or condition(s) imposed on them under a particular clause of any part of the Tender Documents, which includes the forms, and on a similar issue some additional conditions are mentioned under another clause of any other part of the Tender Documents, which includes the forms,

then all the conditions and/ or obligations should be read in conjunction with each other and all of them have to be fulfilled.

- 1.3.37.3** It shall be deemed that by submitting the Tender, the tenderer agrees and releases DFCCIL, its employees, agents, consultants and advisers, irrevocably, unconditionally, fully and finally from any and all liability for claims, losses, damages, costs, expenses or liabilities in any way related to or arising from the exercise of any rights and/ or performance of any obligations hereunder, pursuant hereto and/ or in connection herewith and waives any and all right and/ or claims it may have in their respect, whether actual or contingent, whether present or future. No claim of any nature and to any extent whatsoever shall be made by any Tenderer against DFCCIL, its employees, agents, consultants and advisers.
- 1.3.37.4** The Tender Documents including all attached documents are and shall remain the property of DFCCIL and are transmitted to the Tenderer solely for the purpose of preparation and submission of the Tender in accordance herewith. Tenderer are to treat all information as strictly confidential and shall not use it for any purpose other than for the preparation and submission of their Tenders. DFCCIL will not return any Tender or any information provided to it by the tenderer.

CONTRACT DOCUMENT

1.3.37.5 Execution of Contract Document

The Tenderer whose tender is accepted shall be required to appear in person at the Office of the Chief General Manager, Dedicated Freight Corridor Corporation of India Limited, 7th Floor, New Administrative Building, D. N. Road, Mumbai – 400001, as the case may be, or if tenderer is a firm or corporation, a duly authorized representative shall appear and execute the contract agreement within seven days of notice from DFCCIL that the Contract Agreement is ready. The Contract Agreement shall be entered into by DFCCIL only after submission of valid Performance Guarantee by the Contractor. Failure to do so shall constitute a breach of the agreement affected by the acceptance of the tender. In such cases the DFCCIL may determine that such tenderer has abandoned the contract and there upon his tender and acceptance thereof shall be treated as cancelled and the DFCCIL shall be entitled to forfeit the full amount of the Earnest Money and other dues payable to the Contractor under this contract. The failed Contractor shall be debarred from participating in the re-tender for that work.

1.3.37.6 Performance Guarantee

Refer relevance clause 16(4) of GCC for performance Guarantee.

- (i) The Bank Guarantee for performance Guarantee shall remain valid until a date 60 days (or as specified in the Contract) after expiry of Defects Liability Period.
- (ii) The Bank Guarantee for performance Guarantee shall be submitted invariably in the format given in the bidding document.
- (iii) The performance Guarantee shall be released after issue of performance certificate.

The proforma of Performance Guarantee is enclosed as **Form No-06**.

1.3.37.7 Form of Contract Document

Every contract shall be complete in respect of the document it shall so constitute. Not less than 2 copies of the contract document shall be signed by the competent authority and the Contractor, and one copy given to the Contractor.

For contracts for specific works, the contract document required to be executed by the tenderer whose tender is accepted shall be an agreement as per specimen **FORM No. 05**

1.3.37.8 Security Deposit

The successful tenderer shall have to submit Security Deposit as per **Clause 16 (1) & (2) of General Conditions of Contract**.

1.3.37.9 Applicable Charges/Recoveries etc.

i. Income Tax

DFCCIL will deduct 2% of income tax on the Net Amount (i.e Gross Amount minus GST) and surcharge on income tax of each bill as prescribed by Government from time to time or rate of income tax specified by Income Tax Department in favour of the contractor.

ii. Deployment of Technical Supervisor

As per special condition of contract enclosed along with tender document. The necessary deduction for non-deployment of qualified technical personnel shall be as per special condition of contract.

iii. Tools and Plants

The hire charges of tools and plants shall be as per prevailing rules of Railway.

iv. Price Variation Clause

1. Variation Clause (PVC) shall be applicable only in tender having advertised value above **Rs. 2 Crores and having completion period above 12 months**. Provided further that, in a contract where PVC is applicable, following shall be outside the purview of price adjustments (i.e. shall be excluded from the gross value of the work for the purpose of price variation) :
2. Price Variation Clause shall be dealt with in accordance with provisions of **Clause 46 (A) of General Conditions of Contract**.
3. Price Variation Clause shall not apply to such Works Contracts which is either an Annual Maintenance Contract of a Zonal Contract.

v. Maintenance Period

The maintenance period of various shall as per following table:

SN	Nature of Work	Maintenance Period
1	White/Colour Washing	Three Calendar months from date of completion
2	All New works except Earthwork	Six Calendar months from date of completion
3	Earthwork & Cess Repair Works	Six Calendar months or Monsoon period which is ever later
4	Ballast Supply	No maintenance period
5	Track Works	Normalization of speed/relaxation of speed as per tender condition
6	All Other Works	Six Calendar months or as per special condition of contract

The tenderer(s) shall be required to maintain the work effectively for a period of six months from the date of completion as per Clause 47 of the General Conditions of Contract and no part refund of Security Deposit shall be permitted during the maintenance period mentioned above.

vi. Others Taxes & Royalty

The Contractor shall bear in full, all taxes and royalties levied by the State Government and/or Central Government from time to time. This would be entirely a matter between the Contractor and State Government/or Central Government. DFCCIL will recover the taxes and royalties through final bills if the contractor fails to pay the taxes and royalties to the Government.

vii. Disaster Management

All the available vehicles and equipment's of the contractor can be drafted by the DFCCIL Administration in case of accidents/natural calamities involving human lives. The payment for such drafting shall be made according to the rates as shall be fixed by the Engineer. However, if the contractor is not satisfied with the decision of the Engineer in this respect, he may appeal to the Chief General Manager or General Manager (Co-Ord) within 30 Days of getting the decision of the Engineer, supported by analysis of the rates claimed. The Chief General Manager's decision after hearing both the parties in the matter would be final and binding on the contractor and the DFCCIL.

viii. Emergency Work

In the event of any accident or failure occurring in the execution of work/arising out of it which in the opinion of the Engineer requires immediate attention, the DFCCIL may bring its own workmen or other agency/agencies to execute or partly execute the necessary work or carry out repairs if the Engineer-in-charge considers that the contractor(s) is/are not in a position to do so in time without giving any notice and charge the cost thereof, to be determined by the Engineer-in-charge, to the contractor.

ix. Damage by Accident/ Flood/ Tides or Natural Calamities

The Contractor shall take all precautions against damages from accidents, floods tides or other natural occurrences. He shall not be entitled to any compensation for his tools, plants, materials, machines and other equipment lost or damaged by any cause whatsoever. The Contractor shall be liable to make good the damage to any structure or part of a structure, plant or material of every description belonging to the DFCCIL covered under the Contract, lost or damaged by him due to any cause during the course of execution of work. The DFCCIL Administration will not be liable to pay the contractor any charge for rectification or repair to any damage which may have occurred from any cause whatsoever.

x. Conservancy Cess Charges

Conservancy Cess Charges shall be deducted from each bill as per extant instruction of Railway Board. (Latest instruction for deduction of Conservancy Cess Charges is as per Railway Board's letter No. F(X)I/95/1/1 Dated 05.12.2016.

1.3.37.10 ADVANCES TO CONTRACTORS

Advances to Contractor: - (For Contract Value Rs. 25 Crores and above) Applicable in this Contract

(a) Mobilization advance:

This shall be limited to 10% of the contract value and payable in 2 stages, as indicated below:

Stage I - 5% of Contract Value on signing of the contract agreement.

Stage II - 5% on mobilization of site-establishment, setting up offices, bringing in equipment and actual commencement of work.

The 1st stage of advance shall be payable immediately after signing of contract agreement. The 2nd stage of advance shall be payable at the time of mobilization, after submission of a utilization certificate by the contractor that the stage 1 advance has been properly utilized in the contract.

These Advances shall be payable against irrevocable guarantee (Bank Guarantee, FDRs) from a scheduled commercial bank of India of at least 110% of the value of the sanctioned advance amount (covering principal plus interest).

(b) Advance Against Machinery and Equipment: (Not Applicable)

This advance shall be limited to a maximum of 10% of the contract value against new Machinery & Equipment, involving substantial outlay, brought to site and essentially required for the work. This advance shall not exceed 75% of the purchase price of such Equipment and shall be payable when hypothecated to the DFCCIL by a suitable bond or alternatively covered by an irrevocable Bank Guarantee for full cost of the Plant & Equipment from a Nationalized Bank in India or the State Bank of India in a form acceptable to DFCCIL. The Plant & Equipment shall be insured for the full value and for

the entire period, these are required for the work. This plant & Equipment shall not be removed from the site of work without prior written permission of the Engineer. No advance should be given against old Plant & Machinery.

(c) Advances for accelerating progress of the work during course of execution of Contract: (Not Applicable)

This advance is to be decided on the merits of each case and shall be restricted to a maximum of 5% of contract value. This is to be granted by the Managing Director on the recommendations of the Engineer in-charge, in consultation with the Associate Finance. While recommending this advance for sanction of Managing Director, the Engineer in-charge shall also confirm that progress of the contract work has been as per milestones/targets laid down and no extension to Date of completion of the contract has been given on contractor's account.

(d) Advances in Exceptional Cases: (Not Applicable)

Managing Director is further empowered to grant advances in exceptional cases upto a maximum of Rs. 20 lacs in respect of even contract of value less than Rs. 25 crore, if considered absolutely essential, depending on the merits of each case and circumstances in each situation, to be recommended by the Engineer in-charge and in consultation with the Associate Finance.

(e) The above advances are subject to the following conditions:

- (i) The advances shall carry an interest of 10% (Ten Percent).
- (ii) Advances except those against machinery and equipment shall be payable against irrevocable guarantee (Bank Guarantee, FDRs, KVPs/NSCs) of at least 110% of the value of the sanctioned advance amount (covering principal plus interest). The Bank Guarantee shall be from a Nationalised / Schedule Commercial Bank in India in a form acceptable to the DFCCIL. Format for BG is similar to Tender Form-19 placed at Part-IV of Tender Document.
- (iii) The recovery shall commence when the value of contract executed reaches 15% of original contract value and shall be completed when the value of work executed reaches 85% of the original contract value. The instalments on each "on account bill" will @ 15% of each gross bill amount.
- (iv) That the grant of advance is primarily in DFCCIL's own interest.
- (v) That a contractor does not receive advances for same work from different officers.
- (vi) That arrangements are made with the Accounts Officer for proper accounts being kept with regard to payment and recovery of these advances; and
- (vii) That all necessary precautions are taken to secure Government/DFCCIL from the possibility of loss and for preventing the system becoming more general or continuing longer than what may be absolutely necessary for proper progress of the work.

(f) Method of Recovery of Interest –

Interest shall be recovered on the advance outstanding for the period commencing from the date of payment of advance till date of particular on-account bill (through which recovery of date of principal is effected) and adjusted fully against on-account bill along with principal recovery. In the event of any short-fall, the same shall be carried forward to the next on-account bill and shall attract interest.

The Bank Guarantee for such advance shall clearly cover at least 110% of the value of the sanctioned advance amount (covering principal plus interest).

GENERAL CONDITIONS OF CONTRACT (GCC)

PART-I
Chapter-IV
GENERAL CONDITIONS OF
CONTRACT DEFINITIONS AND
INTERPRETATION

- 1. (1) Definition:-**In these General conditions of Contract, the following terms shall have the meaning assigned hereunder except where the context otherwise requires:-
- (a) “DFCCIL”/ “Employer” shall mean Dedicated Freight Corridor Corporation of India Limited (DFCCIL), a company incorporated under the companies Act, 1956 and having its Registered & Corporate office at Supreme Court Metro Station Building Complex, New Delhi 110001 which expression shall also include its legal successors and permitted assigns.” Acting through CGM/GM(Co) or official specified in tender document.
 - (b) “Railway” shall mean the President of the Republic of India or the Administrative Officers of the Railway or of the Successor Railway authorized to deal with any matter which these presents are concerned on his behalf.
 - (c) “General Manager of Railway” shall mean the officer - in-charge of the General Superintendence and Control of the Railway and shall mean and include their successors, of the successor Railway and shall also include Managing Director/ Director of DFCCIL;
 - (d) “Chief Engineer” shall mean the officer - in-charge of the Engineering Department of Railway and shall also include Chief Engineer (Construction), Chief Signal and Telecommunication Engineer, Chief Signal and Telecommunication Engineer (Construction), Chief Electrical Engineer, Chief Electrical Engineer (Construction) and shall also include Group General Manager /Chief General Manager/ General Manager/Chief Project Manager of DFCCIL.
 - (e) “Divisional Railway Manager” shall mean the Officer in-charge of a Division of the Railway and shall also mean any officer nominated by “Railway” and shall mean and include their successors of the successor Railway.
 - (f) “Engineer” and Employer’s Engineer shall mean the Chief Project Manager/Chief General Manager/ General Manager(Coordination) of DFCCIL or his representative nominated to act as Engineer or PMC appointed by DFCCIL.
 - (g) “Engineer’s Representative” shall mean the Assistant Engineer, Assistant Signal and Telecommunication Engineer and Assistant Electrical Engineer, JPM/APM/DPM/PM/Dy.CPM/Addl. CPM of DFCCIL in direct charge of the work and shall include any Sr. Sec./Sec./Jr.Engineer/Executive/Sr. Executive, JPM/APM/DPM/PM/Dy.CPM of DFCCIL of Civil Engineering / Signal & Telecommunication Engineering / Electrical

Engineering Department appointed by DFCCIL and shall mean and include the Engineer's Representative of the PMC appointed by DFCCIL.

- (h) "Contractor" shall mean the Person / Firm / LLP/ Trust / Cooperative Society or Company whether incorporated or not who enters into the contract with the DFCCIL and shall include their executors, administrators, and successors and permitted assigns.
- (i) "Contractor's authorised engineer" shall mean a graduate engineer having more than 3 years' experience in the relevant field of construction work involved in the contract, duly approved by Engineer.
- (j) "Contract" shall mean and include the Agreement of Work Order, the accepted schedule of rates of the Schedule or Rates of DFCCIL modified by the tender percentage for items of work quantified, or not quantified, General Conditions of Contract, Special Conditions of Contracts, if any, Drawings, Specifications, Additional / Special Specifications, if any and tender forms, if any, and all other documents included as part of contract.
- (k) "Works" shall mean the works to be executed in accordance with the contract.
- (l) "Specifications" shall mean the Specifications for materials and works referred / mentioned in tender documents.
- (m) "Drawing" shall mean the maps, drawings, plans and tracings or prints there of annexed to the contract and shall include any modifications of such drawings and further drawings as may be issued by the Engineer from time to time.
- (n) "Constructional Plan" shall mean all appliances or things of whatsoever nature required for the execution, completion or maintenance of the works or temporary works (as hereinafter defined) but does not include materials or other things intended to form or forming part of the permanent work.
- (o) "Temporary Works" shall mean all temporary works of every kind required for the execution completion and/or maintenance of the works.
- (p) "Site" shall mean the land and other places on, under, in or through which the works are to be carried out and any other lands or places provided by the DFCCIL for the purpose of the Contract.
- (q) "Period of Maintenance" shall mean the defect liability period (DLP) from the date of completion of the works as certified by the Engineer.
- (r) "Bid" or "Tender", "Bidder" or "Tenderer" wherever appearing in this document shall have the same and interchangeable meaning.
- (s) Date of inviting tender shall be the date of publishing tender notice on IREPS website if tender is

published on website or the date of publication in newspaper in case tender is not published on website.

- (t) “Bill of Quantities” shall mean Schedule of Item(s) included in the tender document along with respective quantities and rates, accepted by the DFCCIL.
- (u) Standard Schedule of Rates (SSOR) shall mean the schedule of Rates adopted by the Railway, which includes-
- (i) “Unified Standard Schedule of Rates of the Railway (USSOR)” i.e. the Standard Schedule of Rates of the Railway issued under the authority of the Chief Engineer from time to time, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents;
- (ii) “Delhi Schedule Of Rates (DSR)” i.e. the Standard Schedule of Rates published by Director General/ Central Public Works Department, Government of India, New Delhi, as adopted and modified by the Railway under the authority of the Chief Engineer from time to time, updated with correction slips issued up to date of inviting tender or as otherwise specified in the tender documents.

1. (2) Singular and Plural:- Words importing the singular number shall also include the plural and vice versa where the context requires.

1.(3) Headings & marginal headings: -The headings and marginal headings in these general conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or the contract.

GENERAL OBLIGATION

2.(1) Execution Co-relation and intent of contract Documents: -The contract documents shall be signed in triplicate by the DFCCIL and the Contractor. The contract documents are complementary, and what is called for by any one shall be as binding as if called for by all, the intention of the documents is to include all labour and materials, equipments and transportation necessary for the proper execution of work. Materials or work not covered by or properly inferable from any heading or class of the specifications shall not be supplied by the DFCCIL to the contractors unless distinctly specified in the contract documents. Materials or works described in words which so applied have a well known technical or trade meaning shall be held to refer to such recognized standards.

2.(2) If a work is transferred from the jurisdiction of one Railway to another Railway or to a Project Authority/DFCCIL or vice versa while contract is in subsistence, the contract shall be binding on the Contractor and the Successor Railway/Project in the same manner & take effect all respects as if the Contractor and the Successor Railway/Project were parties there to from the inception and the corresponding officer or the Competent Authority in the Successor Railway/Project will exercise the same powers and enjoy the same authority as conferred to the Predecessor Railway/Project under the

original contract/agreement entered into.

- 2.(3) If for administrative or other reasons the contract is transferred to the Successor Railway/Successor Project Authority of DFCCIL the contract shall notwithstanding any things contained herein contrary there to, be binding on the Contractor and the Successor Railway /Project Authority/ DFCCIL in the same manner and take effect in all respect as if the Contractor and the Successor Railway/ successor Project Authority of DFCCIL had been parties thereto from the date of this contract. The contract shall be Administered/Managed by GGM/CGM/GM/CPM/nominated by DFCCIL.
- 3.(1) **Law governing the contract:-** “This agreement and the relationship between the parties shall be governed, construed and interpreted in accordance with applicable laws of India. Applicable laws shall mean all laws, bye-laws, statutes, rules, regulations, orders, ordinances, codes, guidelines, notices, directions, judgements, decrees or other requirements or official directives and/or of any statutory authority in the Republic of India.”
- 3.(2) **Compliance to regulations and bye-laws:-**The contractor shall conform to the provision of any statute relating to the works and regulations and by-laws of any location authority and of any water and lighting companies or undertakings, with whose system the work is proposed to be connected and shall before making any variation from the drawings or the specifications that may be necessitated by so confirming give to the Engineer notice specifying the variation proposed to be made and the reasons for making the variation and shall not carry out such variation until he has received instructions from the Engineer in respect thereof. The contractor shall be bound to give all notices required by statute, regulations or bye-laws as aforesaid and to pay all fees and taxes payable to any authority in respect hereof.
4. **Communications to be in writing:-** All notices, communications, reference and complaints made by the DFCCIL or the Engineer or the Engineer’s representative or the contractor inters concerning the work shall be in writing and no notice, communication, reference or complaint not in writingshall be recognized.
5. **Service of Notices on Contractors:-**The contractor shall furnish to the Engineer the name designation and address of his authorized agent and all complaints, notices, communications and references shall be deemed to have been duly given to the contractor if delivered to the contractor or his authorized agent or left at or posted to the address so given and shall be deemed to have been so given in the case of posting on day on which they would have reached such address in the ordinary course of post or on the day on which they were so delivered or left. In the case of contract by partners, any change in the constitution of the firm shall be forthwith notified by the contractor to the Engineer.
6. **Occupation and use of land:-** No land belonging to or in the possession of the Railway / DFCCIL shall be occupied by the Contractor without the permission of the Railway / DFCCIL. The Contractor shall not use, or allow to be used, the site for any purposes other than that of executing the works. Whenever non-railway bodies / persons are permitted to use railway premises with competent authority’s approval, conservancy charges as applicable from time to time may be levied.

7. Assignment or subletting of contract:-

The Contractor shall not assign or sublet the contract or any part thereof or allow any person to become interested therein in any manner whatsoever without the special permission in writing of the CGM/GM DFCCIL, save as provided below. Any breach of this condition shall entitle the DFCCIL to rescind the contract under Clause 62 of these Conditions and also render the Contractor liable for payment to the DFCCIL in respect of any loss or damage arising or ensuing from such cancellation; provided always that execution of the details of the work by petty Contractor under the direct and personal supervision of the Contractor or his agent shall not be deemed to be sub-letting under this clause.

In case Contractor intends to subcontract part of work, he shall submit a proposal in writing seeking permission of CGM/GM DFCCIL for the same. While submitting the proposal to DFCCIL, Contractor shall ensure the following:

(a) (i) Total value of work to be assigned to sub-contractor(s) shall not be more than 50% of total contract value.

(ii) The subcontractor shall have successfully completed at least one work similar to work proposed for subcontract in last 5 years, ending date of submission of proposal by Contractor to DFCCIL, costing not less than 35% value of work to be subletted, through a works contract. For fulfilment of above, Work Experience Certificate issued by a Govt. Department/Organisation shall be considered. Further, Work Experience Certificate issued by a Public listed company shall be considered provided the company is having average annual turnover of Rs 500 crore and above in last 3 financial years excluding the current financial year, listed on National Stock Exchange or Bombay Stock Exchange, registered at least 5 years back from the date of submission of proposal by Contractor to DFCCIL and work experience certificate issued by a person authorised by the Public Listed Company to issue such certificates.

Note: For subletting of work costing up to Rs 50 lakh no previous work experience shall be asked for by the DFCCIL.

In case contractor submits subcontractor's work experience certificate issued by public listed company, the contractor shall also submit along with work experience certificate, the relevant copy of work order, bill of quantities, bill wise details of payment received duly certified by Chartered Accountant, TDS certificates for all payments received and copy of final/last bill paid by company in support of above work experience certificate.

(iii) There is no banning of business with the sub-contractor in force over IR/DFCCIL.

(b) The Contractor shall provide to the Engineer a copy of the agreement to be entered into by Contractor with subcontractor. No subcontractor shall be permitted without a formal agreement between Contractor and subcontractor. This agreement shall clearly define the scope of work to be carried out by subcontractor and the terms of payment in clear & unambiguous manner.

(c) On receipt of approval from CGM/GM DFCCIL, Contractor shall enter into a formal agreement legally enforceable in Court of Law with subcontractor and submit a copy of the same to the Engineer.

(d) The Contractor shall intimate to the Engineer not less than 7 days in advance, the intended date of commencement of subcontractor's work.

(e) Once having entered into above arrangement, Contractor shall discontinue such arrangement, if he intends to do so at his own or on the instructions of DFCCIL, with prior intimation to CGM/GM DFCCIL.

- (f) The Contractor shall indemnify DFCCIL against any claim of subcontractor.
- (g) The Contractor shall release payment to the Sub-contractor(s) promptly and shall endeavour to resolve all issues amicably and speedily with the Sub-contractor(s), so that the execution of work is not affected in any manner whatsoever.
- (h) In addition to issuance of work experience certificate to Contractor, the Engineer, when, based on documents, is satisfied that subcontracted work has been carried out by subcontractor, shall issue work certificate to the subcontractor also for the portion of work subcontracted and successfully completed by the sub-contractor.

Note: Work Experience Certificate to the subcontractor shall be issued only when the contractor's work is complete and contractor is entitled for the issuance of Work Experience Certificate. However, in the same contract, when the CGM/GM DFCCIL, based on documents, is satisfied that the subcontractor has successfully carried out subletted work; without issuance of work experience certificate to subcontractor at this stage, the CGM/GM DFCCIL can, only once, consider the successfully completed subletted work for the fulfilment of eligibility for further subletting of work to the subcontractor in the same contract. When the contractor's work is complete and contractor is entitled for the issuance of work experience certificate, the subcontractor shall be issued one Work Experience Certificate for the total scope of work executed by the subcontractor in the contract.

- (i) The responsibility of successful completion of work by subcontractor shall lie with Contractor. Subcontracting will in no way relieve the Contractor to execute the work as per terms of the Contract.
- (j) Further, in case Engineer is of the view that subcontractor's performance is not satisfactory, he may instruct the Contractor to remove the subcontractor from the work and Contractor has to comply with the above instructions with due promptness. Contractor shall intimate the actual date of discontinuation of subcontract to Engineer. No claim of Contractor whatsoever on this account shall be entertained by the DFCCIL and this shall be deemed as 'excepted matter' (matter not arbitrable).
- (k) The permitted subcontracting of work by the Contractor shall not establish any contractual relationship between the sub-contractor and the DFCCIL and shall not relieve the Contractor of any responsibility under the Contract.

8. **Assistance by the DFCCIL for the Stores to be obtained by the Contractor:-** Owing to difficulty in obtaining certain materials (including Tools & Plant) in the market, the DFCCIL may have agreed without any liability therefore to endeavour to obtain or assist the contractor in obtaining the required quantities of such materials as may be specified in the tender. In the event of delay or failure in obtaining the required quantities of the aforesaid material the contractor shall not be deemed absolved of his own responsibility and shall keep in touch with day to day positions regarding their availability and accordingly adjust progress of works including employment of labour and the DFCCIL shall not in any way be liable for the supply of materials or for the non-supply thereof for any reasons whatsoever nor for any loss or damage arising in consequence of such delay or no supply.

9. **Deleted**

10. **Carriage of materials:-** No forwarding orders shall be issued by the DFCCIL for the conveyance of contractor's materials, tools and plant by Rail which may be required for use in the works and the contractor shall pay full freight charges at public tariff rates therefore.

11. Deleted
12. **Representation on Works:-**The contractor shall, when he is not personally present on the site of the works place and keep a responsible agent at the works during working hours who shall on receiving reasonable notice, present himself to the Engineer and orders given by the Engineer or the engineer's representative to the agent shall be deemed to have the same force as if they had been given to the Contractor. Before absenting himself, the contractor shall furnish the name and address of his agent for the purpose of this clause and failure on the part of the Contractor to comply with this provision at any time will entitle the DFCCIL to rescind the contract under clause 62 of these conditions.
13. **Relics and Treasures:-**All gold, silver, oil and other minerals of any description and all precious stones, coins, treasures relics antiquities and other similar things which shall be found in or upon the site shall be the property of the DFCCIL and the Contractor shall duly preserve the same to the satisfaction of the DFCCIL and shall from time to time deliver the same to such person or persons as the DFCCIL may appoint to receive the same.
14. **Excavated material:-**The contractor shall not sell or otherwise dispose of or remove except for the purpose of this contract, the sand, stones, clay, ballast, earth, rock or other substances or materials which may be obtained from any excavation made for the purpose of the works or any building or produced upon the site at the time of delivery of the possession thereof but all the substances, materials, buildings and produce shall be the property of the DFCCIL provided that the contractor may, with the permission of the Engineer, use the same for the purpose of the works either free of cost or pay the cost of the same at such rates as may be determined by the Engineer.
15. **Indemnity by Contractors:-** The contractor shall indemnify and save harmless the Railway/DFCCIL from and against all actions, suit proceedings losses, costs, damages, charges, claims and demands of every nature and description brought or recovered against the Railways /DFCCIL by reason of any act or omission of the contractor, his agents or employees, in the execution of the works or in his guarding of the same. All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the actual loss or damage sustained, and whether or not any damage shall have been sustained.
- 16.(1) **Security Deposit:** The Security Deposit shall be 5% of the contract value. The Bid Security submitted by the Contractor with his tender will be retained/encashed by the DFCCIL as part of security for the due and faithful fulfilment of the contract by the Contractor. Provided further that, if Contractor submits the Cash or Term Deposit Receipt issued from a Scheduled commercial bank of India or irrevocable Bank Guarantee Bond from a Scheduled commercial bank of India in the form of Form 28, either towards the Full Security Deposit or the Part Security Deposit equal to or more than Bid Security, the DFCCIL shall return the Bid Security, to the Contractor.

Balance of Security Deposit may be deposited by the Contractor in cash or Term Deposit Receipt issued from Scheduled commercial bank of India or irrevocable Bank Guarantee bond issued from Scheduled commercial bank of India in the form of Form 24, or may be recovered at the rate of 6% of the bill amount till the full Security Deposit is recovered. Provided also that in case of defaulting Contractor, the DFCCIL may retain any amount due for payment to the Contractor on the pending "on account bills" so that the amounts so retained (including amount guaranteed through Performance Guarantee) may not exceed 08% of the total value of the contract.

The Irrevocable Bank Guarantee submitted towards Security deposit shall be initially valid up to the stipulated date of Maintenance period plus 60 days and shall be extended from time to time, depending upon extension of contract granted in terms of Clause 17A and 17B of the General Conditions of Contract.

Note: Security Deposit deposited in cash by the Contractor or recovered from the running bills of a Contractor or submitted by contractor as Term Deposit Receipt(s) can be refunded/returned to the contractor, in lieu of irrevocable Bank Guarantee bond issued from scheduled commercial bank of India, to be submitted by him, for an amount equal to or more than the already available Security Deposit, provided however that, in a contract of value less than Rs. 50 Crore, such refund/ return of the already available Security Deposit is permitted up to two times and in a contract of value equal to or more than Rs. 50 Crore, such refund / return of the already available Security Deposit is permitted up to three times.

- 16.(2)(i) **Refund of Security Deposit:** Security Deposit mentioned in sub clause (1) above shall be returned to the Contractor along with or after, the following:
- (a) Final Payment of the Contract as per clause 51.(1) and
 - (b) Execution of Final Supplementary Agreement or Certification by Engineer that DFCCIL has No Claim on Contractor and
 - (c) Maintenance Certificate issued, on expiry of the maintenance period as per clause 50.(1), in case applicable.
16. (2)(ii) **Forfeiture of Security Deposit:** Whenever the contract is rescinded as a whole under clause 62 (1) of these conditions, the Security Deposit already with DFCCIL under the contract shall be forfeited. However, in case the contract is rescinded in part or parts under clause 62 (1) of these conditions, the Security Deposit shall not be forfeited.
- 16.(3) No interest shall be payable upon the Bid Security (Bid Security) and Security Deposit or amounts payable to the Contractor under the Contract, but Government Securities deposited in terms of Sub-Clause 16.(4)(b) of this clause will be payable with interest accrued thereon.

16.(4) Performance Guarantee (P.G.)

The procedure for obtaining Performance Guarantee is outlined below:

- (a) The successful bidder shall have to submit a Performance Guarantee (PG) within 21 (Twenty one) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 21 (Twenty one) days and upto 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 12% per annum shall be charged for the delay beyond 21(Twenty one) days, i.e. from 22nd day after the date of issue of LOA. Further, if the 60th day happens to be a declared holiday in the concerned office of the DFCCIL, submission of PG can be accepted on the next working day.

In all other cases, if the Contractor fails to submit the requisite PG even after 60 days from the date of issue of LOA, the contract is liable to be terminated. In case contract is terminated DFCCIL shall be entitled to forfeit Bid Security Deposit and other dues payable against that contract. In case a tenderer has not submitted Bid Security Deposit on the strength of their registration as a Startup recognized by Department of Industrial Policy and Promotion (DIPP) under Ministry of Commerce and Industry, DIPP shall be informed to this effect.

The failed Contractor shall be debarred from participating in re-tender for that work.

- (b) The successful bidder shall submit the Performance Guarantee (PG) in any of the following forms, amounting to 3% (three percent) of the contract value:
- (i) A deposit of cash through e-payment gateway in DFCCIL's Account;
 - (ii) Irrevocable Bank Guarantee;
 - (iii) Government Securities including State Loan Bonds at 5% below the market value;
 - (iv) Pay Orders and Demand Drafts issued by Scheduled Commercial Bank of India;
 - (v) Guarantee Bonds executed by any Scheduled Commercial Bank of India;
 - (vi) Deposit receipts/FDR in favour of DFCCIL (free from any encumbrance) issued by Scheduled Commercial Bank of India;
 - (vii) Deposit in the Post Office Saving Bank;
 - (viii) Deposit in the National Savings Certificates;
 - (viii) Twelve years National Defense Certificates; (ix) Ten years Defense Deposits;
 - (x) National Defense Bonds and
 - (xi) Unit Trust Certificates at 5% below market value or at the face value whichever is less.

- (c) The Performance Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA) has been issued, but before signing of the contract agreement. This P.G. shall be initially valid upto the stipulated date of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the Contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.
- (d) The value of PG to be submitted by the Contractor will not change for variation upto 25% (either increase or decrease). In case during the course of execution, value of the contract increases by more than 25% of the original contract value, an additional Performance Guarantee amounting to 3% (three percent) for the excess value over the original contract value shall be deposited by the Contractor. On the other hand, if the value of contract decreases by more than 25% of the original contract value, Performance Guarantee amounting to 3% (three percent) of the decrease in the contract value shall be returned to the Contractor. The PG amount in excess of required PG for decreased contract value, available with DFCCIL, shall be returned to Contractor as per his request duly safeguarding the interest of DFCCIL.
- (e) The Performance Guarantee (PG) shall be released after physical completion of the work based on 'Completion Certificate' issued by the competent authority stating that the Contractor has completed the work in all respects satisfactorily.
- (f) Whenever the contract is rescinded, the Performance Guarantee already submitted for the contract shall be encashed in addition to forfeiture of Security Deposit available with DFCCIL.
- (g) The Engineer shall not make a claim under the Performance Guarantee except for amounts to which the DFCCIL is entitled under the contract (notwithstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
- (i) Failure by the Contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer may claim the full amount of the Performance Guarantee.
 - (ii) Failure by the Contractor to pay DFCCIL any amount due, either as agreed by the Contractor or determined under any of the Clauses/Conditions of the Agreement, within 30 days of the service of notice to this effect by Engineer.
 - (iii) The Contract being determined or rescinded under clause 62 of the GCC.
- (h) The tenderer who has offered lower total cost as compared to tender value by more than 10 %, shall be required to submit additional Performance Guarantee of value equal to percentage of tender value by which offer is lower than 10%.
17. **Force Majeure Clause:-** If at any time, during the continuance of this contract, the Performance in whole or in part by either party of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, acts of public enemy, civil commotion, sabotage, serious loss or damage by

fire, explosions, epidemics, strikes, lockouts or act of God (hereinafter, referred to events) provided, notice of the happening of any such event is given by either party to the other within 30 days from the date of occurrence thereof, neither party shall by reason of such event, be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non-performance of delay in performance, and works under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist, and the decision of the Engineer as to whether the works have been so resumed or not shall be final and conclusive, PROVIDED FURTHER that if the performance in whole or in part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 120 days, either party may at its option terminate the contract by giving notice to the other party.

17- A Extension of time in Contracts:- Subject to any requirement in the contract as to completion of any portion or portions of the works before completion of the whole, the Contractor shall fully and finally complete the whole of the works comprised in the contract (with such modifications as may be directed under conditions of this contract) by the date entered in the contract or extended date in terms of the following clauses:-

- (i) **Extension due to modification:-** If any modifications have been ordered which in the opinion of the Engineer have materially increased the magnitude of the work, then such extension of the contracted date of completion may be granted as shall appear to the Engineer to be reasonable in the circumstances, provided moreover that the Contractor shall be responsible for requesting such extension of the date as may be considered necessary as soon as the cause thereof shall arise.
- (ii) **Extension for delay not due to DFCCIL or Contractor:-** If in the opinion of the Engineer, the progress of work has any time been delayed by any act or neglect of DFCCIL's employees or by other Contractor employed by the DFCCIL under Sub-Clause (4) of Clause 20 of these Conditions or in executing the work not forming part of the contract but on which Contractor's performance necessarily depends or by reason of proceeding taken or threatened by or dispute with adjoining or to neighbouring owners or public authority arising otherwise through the Contractor's own default etc. or by the delay authorized by the Engineer pending arbitration or in consequences of the Contractor not having received in due time necessary instructions from the DFCCIL for which he shall have specially applied in writing to the Engineer or his authorized representative then upon happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Engineer within 15 days of such happening, but shall nevertheless make constantly his best endeavours to bring down or make good the delay and shall do all that may be reasonably required of him to the satisfaction of the Engineer to proceed with the works. The Contractor may also indicate the period for which the work is likely to be delayed and shall be bound to ask for necessary extension of time.
- (iii) **Extension for delay due to DFCCIL:-** In the event of any failure or delay by the DFCCIL to hand over the Contractor possession of the lands necessary for the execution of the works or to give the necessary notice to commence the works or to provide the necessary drawings or instructions or any other delay caused by the DFCCIL due to any other cause whatsoever, then such failure or delay shall in no way affect or vitiate the contract or alter the character thereof or entitle the Contractor to damages or

compensation therefor, but in any such case, the DFCCIL may grant such extension or extensions of the completion date as may be considered reasonable.

The Contractor shall indicate the period for which the work is likely to be delayed and shall seek extension of time as may be considered necessary under clause 17 A(i) or/and 17 A(ii) or/ and 17 A(iii) above, as soon as the cause thereof shall arise and, in any case, not less than 15 days before the expiry of the date fixed for completion. of the works. The Engineer shall consider the same and shall grant and communicate such extension of time as in his opinion is reasonable having regard to the nature and period of delay and the type-and quantum of work affected thereby. No other compensation shall be payable for works so carried forward to the extended period of time; the same rates, terms and conditions of contract being applicable, as if such extended period of time was originally provided in the original contract itself.

The non-submission of request for extension or submission of request within less than 15 days before the expiry of the date fixed for completion of the works, shall make him ineligible for extension under these sub clauses, subject to final decision of Engineer.

17-B Extension of Time with Liquidated Damages (LD) for delay due to Contractor:-The time for the execution of the work or part of the works specified in the contract documents shall be deemed to be the essence of the contract and the works must be completed not later than the date(s) as specified in the contract. If the Contractor fails to complete the works within the time as specified in the contract for the reasons other than the reasons specified in Clause 17 and 17 A, the DFCCIL may, if satisfied that the works can be completed by the Contractor within reasonable short time thereafter, allow the Contractor for further extension of time (Proforma at Form no.14) as the Engineer may decide. On such extension the DFCCIL will be entitled without prejudice to any other right and remedy available on that behalf, to recover from the rate of Liquidity Damages as decided by the Engineer, between 0.05% to 0.3% of contract value of works for each week or part of the week.

For the purpose of this Clause, the contract value of the works shall be taken as value of work as per contract agreement including any supplementary work order/contract agreement issued. Provided also, that the total amount of liquidated damages under this condition shall not exceed 5% of the contract value or of the total value of the item or groups of items of work for which a separate distinct completion period is specified in the contract.

Provided further, that if the DFCCIL is not satisfied that the works can be completed by the Contractor and in the event of failure on the part of the contractor to complete the work within further extension of time allowed as aforesaid, the DFCCIL shall be entitled without prejudice to any other right or remedy available in that behalf, to appropriate the contractor's Security Deposit and rescind the contract under Clause 62 of these Conditions, whether or not actual damage is caused by such default.

NOTE:

In a contract, where extension(s) of time have been allowed once under clause 17B, further request(s) for extension of time under clause 17 A can also be considered under exceptional circumstances. Such extension(s) of time under clause 17 A shall be without any Liquidated damages, but the Liquidated

damages already recovered during extension(s) of time granted previously under clause 17B shall not be waived. However, Price variation during such extension(s) shall be dealt as applicable for extension(s) of time under clause 17B.

- 17-C Bonus for Early Completion of Work:** In open tenders having advertised value more than Rs.50 crore and original period of completion 12 months or more, when there is no reduction in original scope of work by more than 10%, and no extension granted on either DFCCIL or Contractor's account, Contractor shall be entitled for a bonus of 1% for each 30 days early completion of work. The period of less than 30 days shall be ignored while working out bonus. The maximum bonus shall be limited to 5% of original contract value. The completion date shall be reckoned as the date of issuance of completion certificate by Engineer.
- 18.(1) Illegal Gratification:-** Any bribe, commission, gift or advantage given, promised or offered by or on behalf to the contractor or his partner, agent or servant or, anyone on his behalf, to any officer or employee of the DFCCIL, or to any person on his behalf in relation to obtaining or execution of this or any other contract with the DFCCIL shall, in addition to any criminal liability which he may incur, subject contractor to the rescission of the contract and all other contracts with the DFCCIL and to the payment of any loss or damage resulting from such decision and the DFCCIL shall be entitled to deduct the amounts so payable from any moneys due to the Contractor(s) under this contract or any other contracts with the DFCCIL.
- 18.(2)** The contractor shall not lend or borrow from or have or enter into any monetary dealings and transactions either directly or indirectly with any employee of the DFCCIL and if he shall do so, the DFCCIL shall be entitled forthwith to rescind the contract and all other contracts with the DFCCIL. Any question or dispute as to the commission or any such offence or compensation payable to the DFCCIL under this clause shall be settled by the General Manager/CPM/GM/CGM of the DFCCIL, in such a manner as he shall consider fit and sufficient and his decision shall be final and conclusive. In the event of rescission of the contract under this clause, the contractor will not be paid any compensation whatsoever except payments for the work done up to the date of rescission.

EXECUTION OF WORKS

- 19.(1) Contractor's understanding:-** It is understood and agreed that the contractor has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character, quality and quantity of the materials to be encountered, the character of equipment and facilities needed preliminary to and during the progress of the works, the general and local conditions, the labour conditions prevailing therein and all other matters which can in any way affect the works under the contract.
- 19.(2) Commencement of works:-**The contractor shall commence the works within 28 days from the date of issue of Letter of Acceptance (LOA) in writing to this effect from the Engineer and shall proceed with the same with due expedition and without delay.

- 19.(3) **Accepted Programme of work:-** The contractor who has been awarded the work shall as soon as possible but not later than 28 days after the date of receipt of the acceptance letter in respect of contracts with initial completion period of two years or less or not later than 90 days for other contracts have to submit the detailed programme of work indicating the time schedule of various items of works in the form of Bar Chart/PERT/CPM. He shall also submit the details of organization (in terms of labour and supervisors) plant and machinery, that he intends to utilize (from time to time) for execution of the Work within stipulated date of completion. The programme of work amended as necessary by discussions with the Engineer, shall be treated as the agreed programme of the work for the purpose of this contract and the contractor shall endeavor to fulfil this programme of work. The progress of work will be watched accordingly and the liquidated damages will be with reference to the overall completion date. Nothing stated herein shall preclude the contractor in achieving earlier completion of item or whole of the works than indicated in the programme.
- 19.(4) **Setting out of works:-** The contractor shall be responsible for the correct setting out of all works in relation to original points, lines and levels of reference at his cost. The contractor shall execute the work true to alignment, grade, levels and dimensions as shown in the drawing and as directed by the Engineer's representative and shall check these at frequent intervals. The contractor provide all facilities like labour and instruments and shall co- operate with the Engineer's representative to check all alignment, grades, levels and dimensions. If, at any time, during the progress of the works any error shall appear or arise in any part of the work, the contractor, on being required so to do by the Engineer's representative shall, at his own cost rectify such errors, to the satisfaction of the Engineer's representative. Such checking shall not absolve the contractor of his own responsibility of maintaining accuracy in the work. The contractor shall carefully protect and preserve all bench marks, sight rails, pegs and other things used in setting out the work.
- 20.(1) **Compliance to Engineer's instructions:-**The Engineer shall direct the order in which the several parts of the works shall be executed and the contractor shall execute without delay all orders given by the Engineer from time to time but the contractor shall not be relieved thereby from responsibility for the due performance of the works in all respects.
- 20.(2) **Alterations to be authorized:-**No alterations in or additions to or omissions or abandonment of any part of the works shall be deemed authorized, except under instructions from the Engineer, and the contractor shall be responsible to obtain such instructions in each and every case in writing from the Engineer.
- 20.(3) **Extra works:-** Should works over and above those included in the contract require to be executed at the site, the contractor shall have no right to be entrusted with the execution of such works which may be carried out by another contractor or contractors or by other means at the option of the DFCCIL.
- 20.(4) **Separate contracts in connection with works:-** The DFCCIL shall have the right to let other contracts in connection with the works. The contractor shall afford other contractors' reasonable opportunity for the storage of their materials and the execution of their works and shall properly connect and

coordinate his work with theirs. If any part of the contractor's work depends for proper execution or result upon the work of another contractor(s), the contractor shall inspect and promptly report to the Engineer any defects in such works that render it unsuitable for such proper execution and results. The contractor's failure so-to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of his work, except as to defects which may develop in the other contractor's work after the execution of his work.

21. Instruction of Engineer's Representative: - Any instructions or approval given by the Engineer's representative to contractor in connection with the works shall bind the contractor as though it had been given by the Engineer provided always as follows:

- a. Failure of the Engineer's representative to disapprove any work or materials shall not prejudice, the power of the Engineer thereafter to disapprove such work or material and to order the removal or breaking up thereof.
- b. If the Contractor shall be dissatisfied by reason of any decision of the Engineer's representative, he shall be entitled to refer the matter to the Engineer who shall there upon confirm or vary such decision.

22.(1) Adherence to specifications and drawings:- The whole of the works shall be executed in perfect conformity with the specifications and drawings of the contract. If contractor performs any works in a manner contrary to the specifications or drawings or any of them and without such reference to the Engineer he shall bear all the costs arising or ensuing therefore and shall be responsible for all loss to the DFCCIL.

22.(2) Drawings and specifications of the works:- The contractor shall keep one copy of drawings and specifications at the site, in good order, and such contract documents as may be necessary available to the Engineer or the Engineer's representative.

22.(3) Ownership of drawings and specifications:- All drawings and specifications and copies thereof furnished by the DFCCIL to the Contractor are deemed to be the property of the DFCCIL. They shall not be used on other works and with the exception of the signed contract set, shall be returned by the contractor to the DFCCIL on completion of the work or termination of the contract.

22.(4) Compliance with Contractor's request for details:- The Engineer shall furnish with reasonable promptness, after receipt by him of the contractor's request for the same, additional instructions by means of drawings or otherwise, necessary for the proper execution of the works or any part thereof. All such drawing and instructions shall be consistent with the contract Documents and reasonably inferable there from.

22.(5) Meaning and intent of specification and drawings:- If any ambiguity arises as to the meaning and intent of any portion of the specifications and drawings or as to execution or quality of any work or material, or as to the measurements of the works the decision of the Engineer thereon shall be final subject to the appeal (within 7 days of such decision being intimated to the contractor) to the

General Manager or CPM/CGM/GM who shall have the power to correct any errors, omissions, or discrepancies in aforementioned items and whose decision in the matter in dispute or doubt shall be final and conclusive.

23. **Working during night:-** The Contractor shall not carry out any work between sun-set and sun-rise without the previous permission of the Engineer. However, if the Engineer is satisfied that the work is not likely to be completed in time except by resorting to night work, he may order the same without confirming any right on the Contractor for claiming any extra payment for the same.
24. **Damage to Railway / DFCCIL property or private life and property:-**The contractor shall be responsible for all risk to the work and for trespass and shall make good at his own expense all loss or damage whether to the works themselves or to any other property of the Railway /DFCCIL or the lives, persons or property of others from whatsoever cause in connection with the works until they are taken over by the Railway / DFCCIL and this although all reasonable and proper precautions may have been taken by the contractor, and in case the Railway / DFCCIL shall be called upon to make good any costs, loss or damages, or to pay an compensation, including that payable under the provisions of the Workmen's Compensation Act or any statutory amendments thereof to any person or persons sustaining damages as aforesaid by reason of any act, or any negligence or omissions on the part of the contractor the amount of any costs or charges including costs and charges in connection with legal proceedings, which the Railway / DFCCIL may incur in reference thereto, shall be charged to the contractor. The Railway / DFCCIL shall have the power and right to pay or to defend or compromise any claim of threatened legal proceedings or in anticipation of legal proceedings being instituted consequent on the action or default of the contractor, to take such steps as may be considered necessary or desirable to ward off or mitigate the effect of such proceedings, charging to contractor, as aforesaid any sum or sums of money which may be paid and any expenses whether for reinstatement or otherwise which may be incurred and the propriety of any such payment, defence or compromise, and the incurring of any such expenses shall not be called in question by the contractor.
25. **Sheds, stores houses and Yards:-**The contractor shall at his own expense provide himself with sheds, stores houses and yards in such situations and in such numbers as in the opinion of the Engineer is requisite for carrying on the works and the contractor shall keep at each such sheds, stores houses and yard a sufficient quantity of materials and plant in stock as not to delay the carrying out of the works with due expedition and the Engineer and the Engineer's representative shall have free access to the said sheds, store houses and yards at any time for the purpose of inspecting the stock of materials or plant so kept in hand, and any materials or plan which the Engineer may object to shall not be brought upon or used in the works, but shall be forthwith removed from the sheds, store houses or yards by the contractor. The contractor shall at his own expenses provide and maintain suitable mortar mills, soaking vats or any other equipments necessary for the execution of the works.

26. Provision of efficient and competent Staff at work sites by the Contractor:-

- 26.1 The contractor shall place and keep on the works at all times efficient and competent staff to give the necessary direction to his workmen and to see that they execute their work in sound and proper manner and shall employ only such supervisors, workmen and labourers in or about the execution of any of these works as are careful and skilled in the various trades.
- 26.2 The contractor shall at once remove from the works any agents, permitted sub-contractor, supervisor, workman or labourer who shall be objected to by the Engineer and if and whenever required by the Engineer, he shall submit a correct return showing the names of all staff and workmen employed by him.
- 26.3 In the event of the Engineer being of the opinion that the contractor is not employing on the works a sufficient number of staff and workmen as is necessary for the proper completion of the works within the time prescribed, the contractor shall forthwith on receiving intimation to this effect deploy the additional number of staff and labour specified by the Engineer within seven days of being so required and failure on the part of the contractor to comply with such instructions will entitle the DFCCIL to rescind the contract under clause 62 of these conditions.

26A. Deployment of Qualified Engineers at Work Sites by the Contractor:

- 26A.1 The contractor shall also employ Qualified Graduate Engineer or Qualified Diploma Holder Engineer.
- 26A.2 In case the contractor fails to employ the Engineer, as aforesaid in Para 26A.1, he shall be liable to pay penalty at the rates, as may be prescribed by the DFCCIL through separate instructions from time to time for the default period for the provisions, as contained in Para 26A.1.

26A.3 Deleted

27.(1) Workmanship and testing:- The whole of the works and / or supply of materials specified and provided in the contract or that may be necessary to be done in order to form and complete any part thereof shall be executed in the best and most substantial workman like manner with materials of the best and most approved quality of their respective kinds, agreeable to the particulars contained in or implied by the specifications and as referred to in and represented by the drawings or in such other additional particulars, instructions and drawings may be found requisite to be given during the carrying on of the works and to the entire satisfaction of the Engineer according to the instructions and directions which the contractors may from time to time receive from the Engineer. The materials may be subjected to tests by means of such machines, instruments and appliances as the Engineer may direct and wholly at the expense of the contractor.

27.(2) Removal of improper work and materials:- The Engineer or the Engineer's Representative shall be entitled to order from time to time:

- (a) The removal from the site, within the time specified in the order, of any materials which in his

opinion are not in accordance with the specifications or drawings.

- (b) The substitution of proper and suitable materials, and
- (c) the removal and proper re-execution, notwithstanding any previous tests thereof or on account payments therefor, of any work which in respect of materials or workmanship is not in his opinion in accordance with the specifications and in case of default on the part of the Contractor in carrying out such order, the DFCCIL shall be entitled to rescind the contract under Clause 62 of these conditions.
- (d) The provision of Construction and Demolition Waste Management Rule 2016 issued by Ministry of Environment Forest and Climate Change dated 29.03.2016 and published in the Gazette of India, Part – II, Section -3, Sub-section (ii) are binding upon the Contractor. Contractor shall implement these provisions at worksites, for which no extra payment will be payable.
28. **Facilities for inspection:-** The contractor shall afford the Engineer and the Engineer's Representative every facility for entering in and upon every portion of the work at all hours for the purpose of inspection or otherwise and shall provide all labour, materials, planks, ladders, pumps, appliances and things of every kind required for the purpose and the Engineer and the Engineer's Representative shall at all times have free access to every part of the works and to all places at which materials for the works are stored or being prepared.
29. **Examination of work before covering up:-** The contractor shall give 7 days' notice to the Engineer or the Engineer's representative whenever any work or materials are intended to be covered up in the earth, in bodies or walls or otherwise to be placed beyond the reach of measurements in order that the work may be inspected or that correct dimensions may be taken before being so covered, placed beyond the reach of measurement in default whereof, the same shall at the option of the Engineer or the Engineer's representative be uncovered and measured at the contractor's expense or no allowance shall be made for such work or materials.
30. **Temporary Works:-** All temporary works necessary for the proper execution of the works shall be provided and maintained by the contractor and subject to the consent of the Engineer shall be removed by him at his expenses when they are no longer required and in such manner as the Engineer shall direct. In the event of failure on the part of the contractor to remove the temporary works, the Engineer will cause them to be removed and cost as increased by supervision and other incidental charges shall be recovered from the contractor. If temporary huts are provided by the contractor on the Railway / DFCCIL land for labour engaged by him for the execution of works, the contractor shall arrange for handing over vacant possession of the said land after the work is completed; if the contractor's labour refuse to vacate, and have to be rejected by the Railway / DFCCIL necessary expenses incurred by the Railway / DFCCIL in connection therewith shall be borne by the contractor.
- 31.(1) **Contractor to supply water for works:-** Unless otherwise provided in the contract, the contractor shall be responsible for the arrangements to obtain supply of water necessary for the works.

31.(2) Deleted

31.(3) Deleted

31.(4)(a) **Contractor to arrange supply of Electric power for works:-** Unless otherwise provided in the contract, the contractor shall be responsible for arrangements to obtain supply of electric power for the works.

31.(4)(b) Deleted

32. **Property in materials and plant:-** The materials and plant brought by the Contractor upon the site or on the land occupied by the Contractor in connection with the works and intended to be used for the execution thereof shall immediately, they are brought upon the site of the said land, be deemed to be the property of the DFCCIL. Such of them as during the progress of the works are rejected by the Engineer under Clause 25 of these conditions or are declared by him not to be needed for the execution of the works or such as on the grant of the certificate of completion remain unused shall immediately on such rejection, declaration or grant cease to be deemed the property of the DFCCIL and the Contractor may then (but not before) remove them from the site or the said land. This clause shall not in any way diminish the liability of the Contractor nor shall the DFCCIL be in any way answerable for any loss or damage which may happen to or in respect of any such materials or plant either by the same being lost, stolen, injured or destroyed by fire, tempest or otherwise.

33.(1) **Tools, Plant and Materials Supplied by DFCCIL:-** The Contractor shall take all reasonable care of all tools, plant and materials or other property whether or a like description or not belonging to the DFCCIL and committed to his charge for the purpose of the works and shall be responsible for all damage or loss caused by him, his agents, permitted subcontractor, or his workmen or others while they are in his charge. The Contractors shall sign accountable receipts for tools, plants and materials made over to him by the engineer and on completion of the works shall hand over the unused balance of the same to the Engineer in good order and repair, fair wear and tear excepted, and shall be responsible for any failure to account for the same or any damage done thereto.

33(2) **Hire of DFCCIL / Railway's Plant:-** such plant as concrete mixers, compressors and portable engines for use during execution of the works on such terms as may be specified in the special conditions or in a separate agreement for Hire of Plant.

34.(1) **Precaution during progress of works:-** During the execution of works, unless otherwise specified, the Contractor shall at his own cost provide the materials for and execute all shoring, timbering and strutting works as is necessary for the stability and safety of all structures, excavations and works and shall ensure that no damage, injury or loss is caused or likely to be caused to any person or property.

34.(2) **Roads and Water courses:-** Existing roads or water courses shall not be blocked, cut through, altered, diverted or obstructed in any way by the Contractor, except with the permission of the Engineer. All compensations claimed for any unauthorized closure, cutting through, alterations, diversion or obstruction to such roads or water courses by the Contractor or his agent or his staff shall be

recoverable from the Contractor by deduction from any sums which may become due to him in terms of contract, or otherwise according to law.

34.(3) Provision of access to premises:- During progress of work in any street or thoroughfare, the Contractor shall make adequate provision for the passage of traffic, for securing safe access to all premises approached from such street or thoroughfare and for any drainage, water supply or means of lighting which may maintain at his own cost barriers, lights and other safeguards as prescribed by the Engineer, for the regulation of the traffic, and provide watchmen necessary to prevent accidents. The works shall in such cases be executed night and day if so ordered by the Engineer and with such vigour so that the traffic way be impeded for as short a time as possible.

34.(4) Safety of Public:- The Contractor shall be responsible to take all precautions to ensure the safety of the public whether on public or DFCCIL/Railway property and shall post such look out men as may in the opinion of the Engineer be required to comply with regulations pertaining to the work.

35. Deleted.

36.(1) Suspension of works:- The Contractor shall on the order of the Engineer, suspend the progress of the works or any part thereof for such time or times and in such manner as the Engineer may consider necessary and shall during such suspension properly protect and secure the work so far as is necessary in the opinion of the Engineer. If such suspension is:-

- (a) Provided for in the contract, or
- (b) Necessary for the proper execution of the works or by the reason of weather conditions or by some default on the part of the Contractor, and/or
- (c) Necessary for the safety of the works or any part thereof.

36.(2) The Contractor shall not be entitled to the extra costs, if any, incurred by him during the period of suspension of the works, but in the event of any suspension ordered by the Engineer for reasons other than aforementioned and when each such period of suspensions exceeds 14 days, the contractor shall be entitled to such extension of time for completion of the work as the Engineers may consider proper having regard to the period or periods of such suspensions and to such compensations as the Engineer may consider reasonable in respect of salaries or wages paid by the Contractor to his employees during the periods of such suspension.

36.(3) Suspension lasting more than 3 months:- If the progress of the works or any part thereof is suspended on the order of the Engineer for more than three months at a time, the Contractor may serve a written notice on the Engineer requiring permission within 15 days from the receipt thereof to proceed with the works or that part thereof in regard to which progress is suspended and if such permission is not granted within that time the Contractor by further written notice so served may, but is not bound to, elect to treat the suspension where it affects part only of the works as an omission of such part or where it affects the whole of the works, as an abandonment of the contract by the DFCCIL.

37. Rates for items of works:- The rates, entered in the accepted Schedule of Rates of the Contract are intended to provide for works duly and properly completed in accordance with the general and

special (if any) conditions of the contract and the specifications and drawings together with such enlargements, extensions, diminutions, reductions, alterations or additions as may be ordered in terms of Clause 42 of these conditions and without prejudice to the generality thereof and shall be deemed to include and cover superintendence and labour, supply, including full freight, of materials, stores, patterns, profiles, moulds, fittings, centring, scaffolding, shoring props, timber, machinery, barracks, tackle, roads, pegs, posts, tools and all apparatus and plant required on the works, except such tools, plant or materials as may be specified in the contract to be supplied to the Contractor by the DFCCIL, the erection, maintenance and removal of all temporary works and, buildings, all watching, lighting, bailing, pumping and draining, all prevention of or compensation for trespass, all barriers and arrangements for the safety of the public or of employees during the execution of works, all sanitary and medical arrangements for labour camps as may be prescribed by the DFCCIL, the setting of all work and of the construction, repair and upkeep of all centre lines, bench marks and level pegs thereon, site clearance, all fees duties, royalties, rent and compensation to owners for surface damage or taxes and impositions payable to local authorities in respect of land, structures and all material supplied for the work or other duties of expenses for which the Contractor may become liable or may be put to under any provision of law for the purpose of or in connection with the execution of the contract, and all such other incidental charges or contingencies as may have been specially provided for in the specifications.

38. Deleted

39.(1) Rates for extra items of works:-

(a) Standard Schedule of Rates (SSOR) Items: Any item of work carried out by the Contractor on the instructions of the Engineer which is not included in the accepted Bill(s) of Quantities but figures for the Standard Schedule of Rates (SSOR), shall be executed at the rates set forth in the "Standard Schedule of Rates (SSOR)" modified by the tender percentage as accepted in the contract for that chapter of Standard Schedule of Rates (SSOR).

For item(s) not covered in this sub clause, the rate shall be decided as agreed upon between the Engineer and the Contractor before the execution of such items of work as per sub clause (b).

- (a) Other Items: For any item of work to be carried out by the Contractor but not included in the accepted Bill(s) of Quantities and also not covered under sub clause (a) above, the Contractor shall be bound to notify the Engineer at least seven days before the necessity arises for the execution of such items of works that the accepted Bill(s) of Quantities does not include rate or rates for such extra work involved. The rates payable for such items shall be decided at the meeting to be held between the Engineer and Contractor, in as short a period as possible after the need for the special item has come to the notice. In case the Contractor fails to attend the meeting after being notified to do so or in the event of no settlement being arrived at, the DFCCIL shall be entitled to execute the extra works by other means and the Contractor shall have no claim for loss or damage that may result from such procedure.

The assessment of rates for extra item(s) shall be arrived at based on the prevailing market rates of labour, machinery & materials and by taking guidance from the following documents in order of priority:

- i. Analysis of Rates for “Unified Standard Schedule of Rates of Indian Railways (USSOR)”

- ii. Analysis of Rates for “Delhi Schedule of Rates issued by CPWD (DSR)”
- iii. Market Analysis
- 39.(2)** Provided that if the Contractor commences work or incurs any expenditure in regard thereto before the rates as determined and agreed upon as lastly hereunto fore-mentioned, then and in such a case the Contractor shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of determination of rates as aforesaid according to the rates as shall be fixed by the Engineer. However, if the Contractor is not satisfied with the decision of the Engineer in this respect he may appeal to the CPM/General Manager within 30 days of getting the decision of the Engineer, supported by analysis of the rates claimed. The CGM/CPM's/ General Manager's decision after hearing both the parties in the matter would be final and binding on the Contractor and the DFCCIL.
- 40.(1) Handing over of works:-** The Contractor shall be bound to hand over the works executed under the contract to the DFCCIL complete in all respects to the satisfaction of the Engineer. The Engineer shall determine the date on which the work is considered to have been completed, in support of which his certificate shall be regarded as sufficient evidence for all purposes. The Engineer shall determine from time to time, the date on which any particular section of the work shall have been completed, and the contractor shall be bound to observe any such determination of the Engineer.
- 40.(2) Clearance of site on completion:-** On completion of works, the Contractor shall clear away and remove from the site all constructional plant, surplus materials, rubbish and temporary works of every kind and leave the whole of the site and works clean and in a workman like condition to the satisfaction of the Engineer. No final payment in settlement of the accounts for the works shall be paid, held to be due or shall be made to the Contractor till, in addition to any other condition necessary for final payment, site clearance shall have been effected by him, and such clearance may be made by the Engineer at the expense of the Contractor in the event of his failure to comply with this provision within 7 days after receiving notice to that effect. Should it become necessary for the Engineer to have the site cleared at the expenses of the Contractor, the DFCCIL shall not be held liable for any loss or damage to such of the Contractor's property as may be on the site and due to such removal there from which removal may be effected by means of public sales of such materials and property or in such a way as deemed fit and convenient to the Engineer.
- 40A Offloading of Part(s) of Work:** At the final stage of completion/ commissioning of work, in case the contractor fails to complete the final part(s) of the work and the value of such part(s) of the work is limited to 5% of the original contract value, the Engineer may allow/decide for offloading of such part(s) of works, either after the Contractor's request in writing to do so or after serving a (Fourteen) days suo-moto notice (as per Form-25), if the Engineer is of the opinion that :-
- (i) Such Offloading of works (up to 5% of original contract value) would enable successful completion of contract/work,
- (ii) Termination/ Part termination of the contract at this stage is not be in the interest of the

DFCCIL/work;, and

- (iii) The anticipated additional cost for execution of such works through other mode would not be substantial and can be recovered from the pending dues of the contractor;

The Contractor shall be informed, in due course, by the Engineer of the mode and cost of execution of such offloaded work through other agency(ies) (as per Form-26). The extra expenditure so incurred in execution of the offloaded work, shall be recovered from subsequent Bill(s) or any other dues of the Contractor, but not exceeding the value of Performance Guarantee available in the contract. There shall be no other repercussion of such offloading on execution of the balance contract. The Contractor shall have no claim on account of above mentioned offloading of works.

VARIATIONS IN EXTENT OF CONTRACT

- 41. Modification to contract to be in writing:-** In the event of any of the provisions of the contract requiring to be modified after the contract documents have been signed, the modifications shall be made in writing and signed by the DFCCIL and the Contractor and no work shall proceed under such modifications until this has been done. Any verbal or written arrangement abandoning, modifying, extending, reducing or supplementing the contract or any of the terms thereof shall be deemed conditional and shall not be binding on the DFCCIL unless and until the same is incorporated in a formal instrument and signed by the Contractor, and till then the DFCCIL shall have the right repudiate such arrangements.
- 42.(1) Powers of modification to contract:-** The Engineer on behalf of the DFCCIL shall be entitled by order in writing to enlarge or extend, diminish or reduce the works or make any alterations in their design, character position, site, quantities, dimensions or in the method of their execution or in the combination and use of materials for the execution thereof or to order any additional work to be done or any works not to be done and the contractor will not be entitled, to any compensation for any increase/reduction in the quantities of work but will be paid only for the actual amount of work done and for approved materials supplied against a specific order.
- 42.(2)**
- (i) Unless otherwise specified in the contract, the accepted variation in quantity of each individual item of the contract would be up to 25% of the quantity originally contracted, except in case of foundation work.
- (ii) The contractor shall be bound to carry out the work at the agreed rates and shall not be entitled to any claim or any compensation whatsoever up to the limit of 25% variation in quantity of individual item of works.
- (iv) In case of earthwork, the variation limit of 25% shall apply to the gross quantity of earth work and variation in the quantities of individual classifications of soil shall not be subject to this limit.
- (iii) In case of foundation work, no variation limit shall apply and the work shall be carried out by the contractor on agreed rates irrespective of any variation.
- 42.(3) Valuation of variations:-** The enlargements, extensions, diminution, reduction, alterations or additions

referred to in sub-clause (2) of this clause shall in no degree affect the validity of the contract but shall be performed by the Contractor as provided therein and be subject to the same conditions, stipulations and obligations as if they had been originally and expressly included and provided for in the specifications and drawings and the amounts to be paid therefore shall be calculated in accordance with the accepted schedule of rates. Any extra items / quantities of work falling outside the purview of the provisions of sub-clause (2) above shall be paid for at the rates determined under clause-39 of these conditions.

42.(4) Variations In Quantities During Execution Of Works Contracts :- The procedure detailed below shall be adopted for dealing with variations in quantities during execution of works contracts:

1. Individual NS items in contracts shall be operated with variation of plus or minus 25% and payment would be made as per the agreement rate.
2. In case an increase in quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, the same shall be got executed by floating a fresh tender. If floating a fresh tender for operating that item is considered not practicable, quantity of that item may be operated in excess of 125% of the agreement quantity subject to the following conditions:

(a) Operation of an item by more than 125% of the agreement quantity needs the approval of DFCCIL;

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

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

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

(b) The variation in quantities as per the above formula will apply only to the Individual items of the contract and not on the overall contract value.

(c) Execution of quantities beyond 150% of the overall agreemental value should not be permitted and, if found necessary, should be only through fresh tenders or by negotiating with existing contractor, with approval of DFCCIL.

3. In cases where decrease is involved during execution of contract:

(a) The contract signing authority can decrease the items upto 25% of individual item.

(b) For decrease beyond 25% for individual items or 25% of contract agreement value, the approval of competent authority, after obtaining 'No Claim Certificate' from the contractor and with finance concurrence, giving detailed reasons for each such decrease in the

quantities.

(c) It should be certified that the work proposed to be reduced will not be required in the same work.

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

5. No such quantity variation limit shall apply for foundation items.

6. As far as SOR items are concerned, the limit of 25% would apply to the value of SOR schedule as a whole and not on individual SOR items. However, in case of NS items, the limit of 25% would apply on the individual items irrespective of the manner of quoting the rate (single percentage rate or individual item rate).

7. **Handling Vitiating during Variation in Contract Quantities:**

As a result of variations, a contract shall be considered "vitiating" only when, there is more than 05 (FIVE) percentage difference between present Contractor and new L-1 as a result of variation in contract value are noticed. Percentage shall be calculated with base as the revised contract quantities multiplied by the rates of the present contractor.

When the percentage difference between present Contractor and new L-1 is noticed as becoming beyond the values specified above, the following action shall be taken:

(i) The DFCCIL administration should immediately examine whether it is practicable to bring in a new agency to carry out the extra quantity of work keeping in view the progress of the work in accordance with the original contract and the nature and lay-out of the work. If it is found that there will be no serious practical difficulty in meeting the additional quantity of work done by another agency, then fresh tenders for the extra quantity may be invited otherwise negotiating the rate with the existing contractor for arriving at a reasonable rate for the additional quantities of work, may be adopted.

(ii) The above shall be regulated as under:

a) The case shall be decided by the tender accepting authority (competent for the revised quantity) and shall not be treated as a case of single tender.

b) Executives while executing the work shall make all efforts to ensure that no vitiating takes place in normal circumstances. Vitiating should be an exception rather than a routine affair. Efforts should be made to invite bids on the basis of percentage above/below/at par.

c) Vitiating should always be computed with respect to the items, rates, quantities and

conditions as available at the time of Tender Opening and subsequent changes/ additions by way of new items will not be counted for computing Vitiation.

Note: Variation to be approved should be limited so as not to completely change the scope, character and purpose of the original contract.

CLAIMS

- 43.(1) Monthly Statement of Claims:-** The Contractor shall prepare and furnish to the Engineer once in every month an account giving full and detailed particulars of all claims for any additional expenses to which the Contractor may consider himself entitled to and of all extra or additional works ordered by the Engineer which he has executed during the preceding month and no claim for payment for and such work will be considered which has not been included in such particulars.
- 43.(2) Signing of “No Claim” Certificate:-** The Contractor shall not be entitled to make any claim whatsoever against the DFCCIL under or by virtue of or arising out of this contract, nor shall the DFCCIL entertain or consider any such claim, if made by the Contractor, after he shall have signed a “No Claim” Certificate in favour of the DFCCIL in such form as shall be required by the DFCCIL after the works are finally measured up. The contractor shall be debarred from disputing the correctness of the items covered by “No Claim” Certificate or demanding a clearance to arbitration in respect thereof.

MEASUREMENTS, CERTIFICATES AND PAYMENTS

- 44. Quantities in schedule annexed to Contract:-**The quantities set out in the accepted schedule of rates with items of works quantified are the estimated quantities of the work to be executed by the Contractor in fulfilment of his obligations under the contract.
- 45.(i) Measurement of works by DFCCIL :-** The Contractor shall be paid for the works at the rates in the accepted schedule of rates and for extra works at rates determined under Clause 39 of these conditions on the measurements taken by the Engineer or the Engineer’s representative in accordance with the rules prescribed for the purpose by the DFCCIL. The quantities for items the unit of which in the accepted schedule of rates is 100 or 1000 shall be calculated to the nearest whole number, any; fraction below half being dropped and half and above being taken as one; for items the unit of which in the accepted schedule of rates is single, the quantities shall be calculated to two places of decimals. Such measurements will be taken of the work in progress from time to time and at such intervals as in the opinion of the Engineer shall be proper having regard to the progress of works. The date and time on which “on account” or final measurements are to be made shall be communicated to the Contractor who shall be present at the site and shall sign the results of the measurements (which shall also be signed by the Engineer or the Engineer’s representative) recorded in the official measurements book as an acknowledgement of his acceptance of the accuracy of the measures. Failing the Contractor’s attendance the work

may be measured up in his absence and such measurements shall, notwithstanding such absence, be binding upon the Contractor whether or not he shall have signed the measurement books provided always that any objection made by him to measurement shall be duly investigated and considered in the manner set out below:

- (a) It shall be opened to the Contractor to take specific objection to any recorded measurements or Classification on any ground within seven days of the date of such measurements. Any re-measurement taken by the engineer or the Engineer's representative in the presence of the Contractor or in his absence after due notice has been given to him in consequence of objection made by the Contractor shall be final and binding on the Contractor and no claim whatsoever shall thereafter be entertained regarding the accuracy and classification of the measurements.
- (b) If an objection raised by the Contractor is found by the Engineer to be incorrect the Contractor shall be liable to pay the actual expenses incurred in measurements.

45.(ii) Measurement of works by Contractor's Authorised Representative (If so allowed or instructed):-

(a) The Contractor shall be paid for the works at the rates in the accepted schedule of rates and for extra works at rates determined under Clause 39 of these conditions on the measurements taken by the Contractor's Authorised Engineer in accordance with the rules prescribed for the purpose by the DFCCIL. The quantities for items the unit of which in the accepted schedule of rates is 100 or 1000 shall be calculated to the nearest whole number, any; fraction below half being dropped and half and above being taken as one; for items the unit of which in the accepted schedule of rates is single, the quantities shall be calculated to two places of decimals. Such measurements will be taken of the work in progress from time to time. The date and time on which 'on account' or 'final' measurements are to be made shall be communicated to the Engineer.

The date and time of test checks shall be communicated to the contractor who shall be present at the site and shall witness the test checks, failing the contractor's attendance the test check may be conducted in his absence, and such test checks shall notwithstanding such absence be binding upon contractor provided always that any objection made by contractor to test check shall be duly investigated and considered in the manner set out below:

(b) Incorrect Measurement, actions to be taken:

If in case during test check or otherwise, it is detected by Engineer that agency has claimed any exaggerated measurement or has claimed any false measurement for the works which have not been executed; amounting to variation of 5% or more of claimed gross bill amount, action shall be taken as following:

- (i) On first occasion of noticing exaggerated/false measurement, Engineer shall impose a penalty of 10% of the claimed gross bill value.

(ii) On any next occasion of noticing any exaggerated / false measurement, DFCCIL shall impose penalty of 15% of claimed gross bill value. In addition the facility of recording of measurements by contractor as well as release of provisional payment shall be withdrawn. Once withdrawn, measurement shall be done by DFCCIL as per Clause 45(i) above.

46.(1) “On-Account” Payments:- The Contractor shall be entitled to be paid from time to time by way of “On-Account” payment only for such works as in the opinion of the Engineer he has executed in terms of the contract.

All payments due on the Engineer’s or the Engineer’s representative’s certificates of measurements or Engineer’s certified “Contractor’s authorised Engineer’s measurements” shall be subject to any deductions which may be made under these presents and shall further be subject to, unless otherwise required by Clause 16 of these conditions, a retention of six percent by way of security deposits, until the amount of Security Deposit by way of retained Bid Security and such retentions shall amount to 5% of the total value of the contract provided always that the Engineer may by any certificate make any correction or modification in any previous certificate which shall have been issued by him and that the Engineer may withhold any certificate if the works or any part thereof are not being carried out to his satisfaction.

Payment Procedure: The procedure of payment shall be as follows:

- (i) 75% of eligible running account bill/ due stage payment, shall be made within 10 working days of the submission of the bill.
- (ii) The remaining payment to be made after final checking of the bill within 28 working days of the submission of bill by the Contractor.

In case the payment has not been released within 10 working days as prescribed above, it shall be made as soon as possible, and after payment a written explanation for the delay shall be submitted to the next higher authority within three working days. However, the contractor is barred from making any claim on account of interest or any other loss due to such delayed payment.

46.(2) Rounding off amounts: - The total amount due on each certificate shall be rounded off to the nearest rupee i.e. sum less than 50 paise shall be omitted and sums of 50 paise and more upto Re. 1/- will be reckoned as Re. 1/-

46.(3) On Account Payments not prejudicial to final settlement: - “On-Account” payments made to the Contractor shall be without prejudice to the final making up of the accounts (except where measurements are specifically noted in the Measurement Book as “Final Measurements” and as such have been signed by the Contractor and Engineer’s/Engineer’s Representative) and shall in no respect be considered or used as evidence of any facts stated in or to be inferred from such accounts nor of any particular quantity of work having been executed nor of the manner of its execution being satisfactory.

46.(4) Advances to the Contractor shall be paid as per Chapter-V Part-I Special Conditions of Contract of

the Tender Document.

46.(5) Manner of payment: - Unless otherwise specified payments to the Contractor will be made by RTGS/NEFT only.

46A PRICE VARIATION CLAUSE:

46A.1 Applicability:

Price Variation Clause (PVC) shall be applicable only in tender having advertised value above Rs.2 Crore. Provided further that, in a contract where PVC is applicable, following shall be outside the purview of price adjustments (i.e. shall be excluded from the gross value of the work for the purpose of price variation)

- a) Materials supplied by DFCCIL to the Contractors, either free or at fixed rate;
- b) Any extra item(s) included in subsequent variation falling outside the purview of the Bill(s) of Quantities of tender, under clause 39. (1)(b) of these General Conditions, unless applicability of PVC and 'Base Month' has been specially agreed, while fixing the rates of such extra item(s).

46A.2 Base month: The Base Month for 'Price Variation Clause' shall be taken as the one month prior to closing of tender, unless otherwise stated elsewhere. The quarter for applicability of PVC shall commence from the month following the Base month. The Price Variation shall be based on the average Price Index of the quarter under consideration.

46A.3 Validity: Rates accepted by DFCCIL shall hold good till completion of work and no additional individual claim shall be admissible except:

- (a) Payment/recovery for increase/decrease in GST on works contract or imposition/removal of any tax/cess on Works Contract as per Clause 37,
- (b) Payment/recovery for overall market situation as per Price Variation Clause given hereunder.

46A.4 Adjustment for variation in prices of material, labour, fuel, explosives detonators, steel, concreting, ferrous, nonferrous, insulator, zinc and cement shall be determined in the manner prescribed hereunder.

46A.5 Components of various items in a contract on which variation in prices be admissible shall be material, labour, fuel, explosives & detonators, steel, cement, concreting, ferrous, nonferrous, insulator, zinc, erection, etc. However, for fixed component, no price variation shall be admissible.

46A.6 The percentages of labour component, material component, fuel component etc. in this contract for items under Schedule-A and B (other than supply of cement and steel in Schedule-C) shall be as under:

Sl. No	Classification		1A,2&3A	4A	5A	6A	7	8A	9A	1B,3B,4B,5B,6B,8B & 9B	1C,3C,4C,5C,6C,8C & 9C	3D,4D,5D,6D,8D & 9D	3E,4E,5E,6E,8E & 9E
	Components												
1	Fixed	*	15	15	15	15	15	15	15	15	15	15	15
2	Labour	Lc	20	25	30	20	50	20	20	0	0	10	25
3	Steel	Sc	0	0	0	0	0	0	0	85	0	50	0
4	Cement	Cc	0	0	15	0	0	0	0	0	85	0	0
5	Plant Machinery & Spares	PMc	30	15	5	20	15	20	30	0	0	10	30
6	Fuel & Lubricants	Fc	25	15	5	15	15	20	15	0	0	10	20
7	Other Materials	Mc	10	15	30	30	5	25	20	0	0	5	10
8	Detonators & Explosive	Ec	0	15	0	0	0	0	0	0	0	0	0
Total			100	100	100	100	100	100	100	100	100	100	100
			0	0	0	0	0	0	0	0	0	0	0

* It shall not be considered for any price variation

The classification mentioned in the table above represents following type of item(s) in the work(s)-

1 Earthwork in Formation

1A All item(s) excluding 1B or/and 1C

1B Item(s) for supply of Steel

1C Item(s) for supply of Cement

2 Ballast Supply Works

3 Tunnelling Works (without explosives)

3A All item(s) excluding 3B or/and 3C or/and 3D or/and 3E

- 3B Item(s) for supply of Steel
- 3C Item(s) for supply of Cement or/and grout
- 3D Item(s) for Fabrication & Erection of Structures including supply of Steel
- 3E Item(s) for Fabrication & Erection of Structures excluding supply of Steel

4 Tunnelling Works (with explosives)

- 4A All item(s) excluding 4B or/and 4C or/and 4D or/and 4E
- 4B Item(s) for supply of Steel
- 4C Item(s) for supply of Cement or/and grout
- 4D Item(s) for Fabrication & Erection of Structures including supply of Steel
- 4E Item(s) for Fabrication & Erection of Structures excluding supply of Steel

5 Building Works

- 5A All item(s) excluding 5B or/and 5C or/and 5D or/and 5E
- 5B Item(s) for supply of Steel
- 5C Item(s) for supply of Cement
- 5D Item(s) for Fabrication & Erection of Structures including supply of Steel
- 5E Item(s) for Fabrication & Erection of Structures excluding supply of Steel

6 Bridges & Protection Work

- 6A All item(s) excluding 6B or/and 6C or/and 6D or/and 6E
- 6B Item(s) for supply of Steel
- 6C Item(s) for supply of Cement
- 6D Item(s) for Fabrication, Assembly, Erection & Launching of Girders including supply of Steel
- 6E Item(s) for Fabrication, Assembly, Erection & Launching of Girders excluding supply of Steel

7 Permanent Way linking

8 Platform, Passenger Amenities

- 8A All item(s) excluding 8B or/and 8C or/and 8D or/and 8E
- 8B Item(s) for supply of Steel item/fittings
- 8C Item(s) for supply of Cement item
- 8D Item(s) for Fabrication & Erection of structures including supply of Steel
- 8E Item(s) for Fabrication & Erection of structures excluding supply of Steel

9 Any other works not covered in Classification 1 to 8

- 9A All item(s) excluding 9B or/and 9C or/and 9D or/and 9E
- 9B Item(s) for supply of Steel
- 9C Item(s) for supply of Cement or/and Grout
- 9D Item(s) for Fabrication & Erection of structures including supply of Steel

9E Item(s) for Fabrication & Erection of structures excluding supply of Steel

46A.7 Formulae: The amount of variation in prices in the several components (labour, material etc.) shall be worked out by the following formulae:

$$(i) \quad L = \frac{(W \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (LQ - LB) \times LC}{LB \times 100}$$

$$(ii) \quad M = \frac{(W \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (MQ - MB) \times MC}{MB \times 100}$$

$$(iii) \quad F = \frac{(W \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (FQ - FB) \times FC}{FB \times 100}$$

$$(iv) \quad E = \frac{(W) \times (E_Q - E_B) \times E_C}{E_B \times 100}$$

$$(v) \quad PM = \frac{(W \text{ or } W_{SF} \text{ or } W_F \text{ or } W_{SFL} \text{ or } W_{FL}) \times (PMQ - PMB) \times PMC}{PMB \times 100}$$

$$(vi) \quad S = \frac{(W \text{ or } W_S \text{ or } W_{SF}) \times (S_Q - S_B) \times S_C}{S_B \times 100}$$

- Applicable for Schedule ...
- No other PVC shall be paid on Schedule

$$(vii) \quad C = \frac{(W \text{ or } W_C) \times (C_Q - C_B) \times C_C}{C_B \times 100}$$

- Applicable for Schedule
- No other PVC shall be paid on Schedule

Where,

L	Amount of price variation in Labour
M	Amount of price variation in Materials
F	Amount of price variation in Fuel
E	Amount of price variation in Explosives
PM	Amount of price variation in Manufacture of machinery for mining, Quarrying and Construction
S	Amount of price variation in Steel Supply Item
C	Amount of price variation in Cement Supply Item
L _C	% of Labour Component

M_C	% of Material Component F_C % of Fuel Component
E_C	% of Explosive Component in the item(s)
S_C	% of Steel Supply item Component in the item(s)
C_C	% of Cement Supply item Component in the item(s)
PM_C	% of Manufacture of machinery for mining, Quarrying and Construction Component
W	Gross value of work done by Contractor as per on-account bill(s) excluding the Gross value of work under WS or/and WC or/and WSF or/and WF or/and WSFL or/and WFL and cost of materials supplied by DFCCIL either free or at fixed rate,
W_C	Gross value of work done by Contractor for item(s) of supply of cement and /or supply of grout material.
W_S	Gross value of work done by Contractor for item(s) of supply of steel.
W_{SF}	Gross value of work done by Contractor for item(s) of Fabrication & Erection of Structures including supply of Steel.
W_F	Gross value of work done by Contractor for Fabrication & Erection of Structures excluding supply of Steel.
W_{SFL}	Gross value of work done by Contractor for item(s) of Fabrication, Assembly, Erection / Launching of Girders including supply of Steel.
W_{FL}	Gross value of work done by Contractor for item(s) of Fabrication, Assembly, Erection / Launching of Girders excluding supply of Steel.
L_B	Consumer Price Index for Industrial Workers - All India: Published in R.B.I. Bulletin for the base period.
L_Q	Consumer Price Index for Industrial Workers - All India: Published in R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration
M_B	Wholesale Price Index: All commodities – as published in the R.B.I. Bulletin for the base period
M_Q	Wholesale Price Index: All commodities – as published in the R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration
F_B	Wholesale Price Index for the group Fuel & Power as published in the R.B.I. Bulletin for the base period
F_Q	Index Number of Wholesale Price Index – By Groups and Sub-Groups for the group Fuel & Power as published in the R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration
E_B	Index number of Monthly Whole Sale Price Index for the category ‘Explosive’ of (g). Manufacture of other chemical products under (J) MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the base period.
E_Q	Index number of Monthly Whole Sale Price Index for the category ‘Explosive’ of (g). Manufacture of other chemical products under (J) MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS, published by Office of Economic Adviser, Govt. of India, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the average price index

- of 3 months of the quarter under consideration.
- PM_B Index number of Monthly Whole Sale Price Index for the category ‘k. Manufacture of machinery for mining, quarrying and construction’ under (R) MANUFACTURE OF MACHINERY AND EQUIPMENT, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the base period.
- PM_Q Index number of Monthly Whole Sale Price Index for the category ‘k. Manufacture of machinery for mining, quarrying and construction’ under (R) MANUFACTURE OF MACHINERY AND EQUIPMENT, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the average price index of 3 months of the quarter under consideration.
- S_W Gross value of steel supplied by the Contractor as per the ‘on-account’ bill for the month under consideration.
- S_B The average rate provided by the Joint Plant Committee for the relevant category of steel item as mentioned in Clause 46A.9; for the base period.
- S_Q The average rate provided by the Joint Plant Committee for the relevant category of steel item as mentioned in Clause 46A.9; for the 3 months of the quarter under consideration.
- C_B Index No. of Wholesale Price Index of sub-group Cement, Lime & Plaster as published in RBI Bulletin for the base period
- C_Q No. of Wholesale Price Index of sub-group Cement, Lime & Plaster as published in RBI Bulletin for the average price index of the 3 months of the quarter under consideration.

- 46A.8** The demands for escalation of cost shall be allowed on the basis of provisional indices as mentioned above in Clause 46A.7. Any adjustment needed to be done based on the finally published indices shall be made as and when they become available.

Special Note:

(1) It is clearly indicated that price variation implies both increase as well decrease in input prices and therefore price variation during the currency of the contract may result in extra payment or recovery as the case may be.

(2) General Conditions of Contract shall be applicable in context of Price variation. However, decision of Engineer shall be final & finding, in case of any conflict.

- 46A.9: (1)** Relevant categories of steel for the purpose of operating Price Variation formula as mentioned in this Clause shall be as under:

SL	Classification	Rates to be used for calculating S _Q or S _B
1.	Reinforcement bars and other rounds	Average of per tonne rates of 10mm dia TMT & 25mm dia TMT; confirming IS1786; Fe 500D

2.	All types and sizes of angles, channels and joists	Average of per tonne rates of 'Angle 75x75x6mm, Mild Steel Plate 10mm thickness and Channel 150x75mm; confirming IS2062, E250 Gr "A"
3.	All types and sizes of plates	Average of per tonne rates of 'MS Plates 10mm thickness and 25mm thickness; confirming IS2062, E250 Gr "A"
4.	Any other section of steel not covered in the above categories	Average of price for the 3 categories covered under SL 1, 2 & 3 in this table.

(2). Relevant city for referring "JPC (Joint Plant Committee)" rates of steel items (SQ /SB) in different field unit shall be as under :

SL	City	Field Unit
1.	Delhi	Noida, Jaipur, Ajmer, Ambala, Meerut, Tundla, Prayagraj West, Prayagraj East
2.	Kolkata	Deen Dayal Upadhyay, Kolkata
3.	Mumbai	Ahmedabad, Vadodara, Mumbai North, Mumbai South

46A.10 Price Variation During Extended Period of Contract

The price adjustment as worked out above, i.e. either increase or decrease shall be applicable upto the stipulated date of completion of work including the extended period of completion where such extension has been granted under Clause 17-A of the General Conditions of Contract. However, where extension of time has been granted due to contractor's failure under Clause 17 -B of the General Conditions of Contract, price adjustment shall be done as follows:

(a) In case the indices increase above the indices applicable to the last month of original completion period or the extended period under Clause 17-A, the price adjustment for the period of extension granted under Clause 17-B shall be limited to the amount payable as per the Indices applicable to the last month of the original completion period or the extended period under Clause 17-A of the General Conditions of Contract; as the case may be.

(b) In case the indices fall below the indices applicable to the last month of original/extended period of completion under Clause 17-A, as the case may be; then the lower indices shall be adopted for the price adjustment for the period of extension under Clause 17-B of the General Conditions of Contract.

47.0 Maintenance of works:- The Contractor shall at all times during the progress and continuance of the works and also for the period of maintenance specified in the Tender Form after the date of passing of the certificate of completion by the Engineer or any other earlier date subsequent to the completion of the works that may be fixed by the Engineer be responsible for and effectively maintain and uphold in good substantial, sound and perfect condition all and every part of the works and shall make good

from time to time and at all times as often as the Engineer shall require, any damage or defect that may during the above period arise in or be discovered or be in any way connected with the works, provided that such damage or defect is not directly caused by errors in the contract documents, act of providence or insurrection or civil riot, and the contractor shall be liable for and shall pay and make good to the DFCCIL or other persons legally entitled thereto whenever required by the Engineer so to do, all losses, damages, costs and expenses they or any of them may incur or be put or be liable to by reasons or in consequence of the operations of the Contractor or of his failure in any respect.

- 48.(1) Certificate of completion of works:-** As soon as in the opinion of the Engineer, the works has been completed and has satisfactorily passed any final test or tests that may be prescribed, the Engineer shall issue a certificate of completion duly indicating the date of completion in respect, of the work and the period of maintenance of the work shall commence from the date of completion mentioned in such certificate. The Engineer may also issue such a certificate indicating date of completion with respect to any part of the work (before the completion of the whole of work), which has been both completed to the satisfaction of the Engineer and occupied or used by the DFCCIL. When any such certificate is given in respect of part of a work, such part shall be considered as completed and the period of maintenance of such part shall commence from the date of completion mentioned in the completion certificate issued for that part of the work.
- 48.(2) Contractor not absolved by completion Certificate:-** The Certificate of completion in respect of the works referred to in sub-clause (1) of this clause shall not absolve the Contractor from his liability to make good any defects imperfections, shrinkages or faults which may appear during the period of maintenance specified in the tender arising in the opinion of the Engineer from materials or workmanship not in accordance with the drawings or specifications or instruction of the Engineer, which defects, imperfections, shrinkages or faults shall upon the direction in writing of the Engineer be amended and made good by the Contractor at his own cost: and in case of default on the part of Contractor the Engineer may employ labour and materials or appoint another Contractor to amend and make good such defects, imperfections, shrinkages and faults and all expenses consequent thereon and incidental thereto shall be borne by the Contractor and shall be recoverable from any moneys due to him under the contract.
- 49.0 Approval only by maintenance Certificate:-** No certificate other than Maintenance Certificate, if applicable, referred to in Clause 50 of the Conditions shall be deemed to constitute approval of any work or other matter in respect of which it is issued or shall be taken as an admission of the due performance of the contract or any part thereof.
- 50.(1) Maintenance Certificate:-** The Contract shall not be considered as completed until a Maintenance Certificate shall have been signed by the Engineer stating that the works have been completed and maintained to his satisfaction. The Maintenance Certificate shall be given by the Engineer upon the expiration of the period of maintenance or as soon thereafter as any works ordered during such period pursuant to sub clause (2) Clause 48 of these conditions shall have been completed to the satisfaction of the Engineer and full effect shall be given to this Clause

notwithstanding the taking possession of or using the works or any part thereof by the DFCCIL.

- 50.(2) Cessation of DFCCIL Liability:** - The DFCCIL shall not be liable to the Contractor for any matter arising out of or in connection with the contract of the execution of the works unless the contractor shall have made a claim in writing in respect thereof before the issue of the Maintenance Certificate under this clause.
- 50.(3) Unfulfilled Obligations:-** Notwithstanding the issue of the Maintenance certificate the Contractor and (subject to sub-clause 2 of this clause) the DFCCIL shall remain liable for the fulfillment of any obligation incurred under the provision of the contract prior to the issue of the maintenance Certificate which remains unperformed at the time such certificate is issued and for the purposes of determining the nature and extent of any such obligations the contract shall be deemed to remain in force between the parties thereto.
- 51.(1) Final Payment:-** On the Engineer's certificate of completion in respect of the works, adjustment shall be made and the balance of account based on the Engineer or the Engineer's representative's certified measurements or Engineer's certified "Contractor's authorised Engineer's measurements" of the total quantity of work executed by the contractor upto the date of completion and on the accepted schedule or rates and for extra works on rates determined under Clause 39 of these conditions shall be paid to the Contractor subject always to any deduction which may be made under these presents and further subject to the Contractor having delivered to the Engineer either a full account in detail of all claims he may have on the DFCCIL in respect of the works or having delivered "No Claim Certificate" and the Engineer having after the receipt of such account given a certificate in writing that such claims are not covered under excepted matter i.e. Clauses 7(j), 8, 18, 22(5), 39.1, 39.2, 40A, 43(2), 45(i)(a), 55, 55-A(5), 57, 57A, 61(1), 61(2) and 62(1), 63(iv) and 63.2.11 of the General Conditions of Contract or in any Clause (stated as excepted matter) of the Special Conditions of the Contract, that the whole of the works to be done under the provisions of the Contracts have been completed, that they have been inspected by him since their completion and found to be in good and substantial order, that all properties, works and things, removed, disturbed or injured in consequence of the works have been properly replaced and made good and all expenses and demands incurred by or made upon the DFCCIL for or in the respect of damage or loss by from or in consequence of the works, have been satisfied agreeably and in conformity with the contract.
- 51.(2) Post Payment Audit:-** It is an agreed term of contract that the DFCCIL reserves to itself the right to carry out a post-payment audit and or technical examination of the works and the final bill including all supporting vouchers, abstracts etc. and to make a claim on the contractor for the refund any excess amount paid to him if as a result of such examination any over-payment to him is discovered to have made in respect of any works done or alleged to have been done by him under the contract.
- 51.A Production of vouchers etc. by the Contractor:-**
- (i) For a contract of more than one crore of rupees, the contractor shall, whenever required, produce or

cause to be produced for examination by the Engineer any quotation, invoice, cost or other account, book of accounts, voucher, receipt, letter, memorandum, paper of writing or any copy of or extract from any such document and also furnish information and returns verified in such manner as may be required in any way relating to the execution of this contract or relevant for verifying or ascertaining cost of execution of this contract (the decision of the engineer on the question of relevancy of any documents, information or return being final and binding in the parties). The contractor shall similarly produce vouchers; etc., if required to prove to the Engineer, that materials supplied by him, are in accordance with the specifications laid down in the contract.

- (ii) If any portion of the work in a contract of value more than one crore of rupees be carried out by a sub-contractor or any subsidiary or allied firm or company (as per Clause 7 of the General Conditions of Contract), the Engineer shall have power to secure the books of such sub-contract or any subsidiary or allied firm or company, through the contractor, and such books shall be open to his inspection.
- (iii) The obligations imposed by sub clause (i) & (ii) above is without prejudice to the obligations of the contractor under any statute rules or orders binding on the contractor.

52.0 Withholding and lien in respect of sums claimed:- Whenever any claim or claims for payment of a sum of money arises out of or under the contract against the contractor, the DFCCIL shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any, deposited by the contractor and for the purpose aforesaid, the DFCCIL shall be entitled to withhold the said cash security deposit or the security if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, the DFCCIL shall be entitled to withhold and have a lien to the extent of the such claimed amount or amounts referred to supra, from any sum or sums found payable or which at any time thereafter may become payable to the contractor under the same contract or any other contract with this or any other DFCCIL or any Department of the Central Government pending finalization or adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above, by the DFCCIL will be kept withheld or retained as such by the DFCCIL till the claim arising out of or under the contract is determined by the arbitrator (if the contract governed by the arbitration clause) or by the competent court as the case may be and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to supra and duly notified as such to the contractor. For the purpose of this clause, where the contractor is a partnership firm or a limited company, the DFCCIL shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/limited company, as the case may be whether in his individual capacity or otherwise.

52A. Lien in respect of claims in Other Contracts:-

(i) Any sum of money due and payable to the contractor (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the DFCCIL, against any claim of this or any other DFCCIL or any other Department of the Central Government in respect of a payment of a sum of money arising out of or under any other contract made by the contractor with this or any other Department of the Central Government.

(ii) However, recovery of claims of DFCCIL in regard to terminated contracts may be made from the Final Bills, Security Deposits and Performance Guarantees of other contract or contracts, executed by the contractor. The Performance Guarantees submitted by the Contractor against other contracts, if required, may be withheld and encashed. In addition, 10% of each subsequent 'on-account bill' may be withheld, if required, for recovery of DFCCIL's dues against the terminated contract.

(iii) It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the DFCCIL will be kept withheld or retained as such by the DFCCIL till the claim arising out of or under any other contract is either mutually settled or determined by arbitration, if the other contract is governed by arbitration clause or by the competent court as the case may be and contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

53.0 Signature on Receipts for Amounts:- Every receipt for money which may become payable or for any security which may become transferable to the Contractors under these presents, shall, if signed in the partnership name by anyone of the partners of a Contractor's firm be a good and sufficient discharge to the DFCCIL in respect of the moneys or security purported to be acknowledged thereby and in the event of death of any of the Contractor, partners during the pendency of the contract it is hereby expressly agreed that every receipt by anyone of the surviving Contractor partners shall if so signed as aforesaid be good a sufficient discharge as aforesaid provided that nothing in this clause contained shall be deemed to prejudice or effect any claim which the DFCCIL may hereafter have against the legal representative of any contractor partner so dying for or in respect to any breach of any of the conditions of the contract, provided also that nothing in this clause contained shall be deemed to prejudice or effect the respective rights or obligations of the Contractor partners and of the legal representatives of any deceased Contractor partners interse.

LABOUR

54.0 Wages to Labour :- The Contractor shall be responsible to ensure compliance with the provision of the Minimum Wages Act, 1948 (hereinafter referred to as the "said Act" and the Rules made there under in respect of any referred to as the "said Act" and the Rules made there under in respect of any employees directly or through petty contractors or subcontractors employed by him on road construction or in building operations or in stone breaking or stone crushing for the purpose of carrying

out this contract. If, in compliance with the terms of the contract, the Contractor supplied any labour to be used wholly or partly under the direct orders and control of the DFCCIL whether in connection with any work being executed by the Contractor or otherwise for the purpose of the DFCCIL such labour shall, for the purpose of this clause, still be deemed to be persons employed by the Contractor.

If any moneys shall, as a result of any claim or application made under the said Act be directed to be paid by the DFCCIL, such money shall be deemed to be moneys paid by it as aforesaid within seven days after the same shall have been demanded, the DFCCIL shall be entitled to recover the same form any moneys due or accruing to the Contractor under this or any other Contract with the DFCCIL.

54A. Apprentices Act:-The Contractor shall be responsible to ensure compliance with the provisions of the Apprentices Act, 1961 and the Rules and Orders issued there under from time to time in respect of apprentices directly or through petty contractors or sub-contractors employed by him for the purpose of carrying out the Contract.

If the contractor directly or through petty contractors or sub-contractors fails to do so, his failure will be a breach of the contract and the DFCCIL may, in its discretion, rescind the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation of the provisions of the Act.

Note: The contractors are required to engage apprentices when the works undertaken by them last for a period of one year or more and / the cost of works is rupees one lakh or more.

55.0 Provisions of payments of Wages Act:-The Contractor shall comply with the provisions of the Payment of Wages Act, 1936 and the rules made there under in respect of all employees directly or through petty contractors or sub-contractors employed by him in the works. If In compliance with the terms of the contract, the Contractor directly or through petty contractors of sub-contractors shall supply any labour to be used wholly or partly under the direct orders and control of the Engineer whether in connection with the works to be executed hereunder or otherwise for the purpose of the Engineer such labour shall never the less be deemed to comprise persons employed by the contractor and any moneys which may be ordered to be paid by the Engineer shall be deemed to be moneys payable by the Engineer on behalf of the Contractor and the Engineer may on failure of the contractor to repay such money to the DFCCIL deduct the same from moneys due to contractor in the terms of contract. The DFCCIL shall be entitled to deduct from any moneys due to the contractor (whether under this contract or any other contract) all moneys paid or payable by the DFCCIL by the way of compensation of aforesaid or for costs of expenses in connection with any claim thereto and the decision of the Engineer upon any question arising out of the effect or force of this clause shall be final and binding upon the Contractor.

55A. Provisions of Contract labour (Regulation and Abolition) Act, 1970:

55A.(1) The contractor shall comply with the provision of the contract labour (Regulation and Abolition) Act, 1970 and the Contract labour (Regulation and Abolition) Central Rules 1971 as modified from time

to time, wherever applicable and shall also indemnify the DFCCIL from and against any claims under the aforesaid Act and the Rules.

55A.(2) The Contractor shall obtain a valid licence under the aforesaid Act as modified from time to time before the commencement of the work and continue to have a valid licence until the completion of the work. Any failure to fulfill the requirement shall attract the penal provision of the Contract arising out of the resultant non-execution of the work.

55A.(3) The Contractor shall pay to the labour employed by him directly or through subcontractors the wages as per provision of the aforesaid Act and the Rules wherever applicable. The Contractor shall notwithstanding the provisions of the contract to the contrary, cause to be paid the wages to labour indirectly engaged on the works including any engaged by subcontractors in connection with the said work, as if the labour had been immediately employed by him.

55A.(4) In respect of all labour directly or indirectly employed in the work for performance of the contractor's part of, the contract, the Contractor shall comply with or cause to be complied with the provisions of the aforesaid Act and Rules wherever applicable.

55A.(5) In every case in which, by virtue of the provisions of the aforesaid Act or the Rules, the DFCCIL is obliged to pay any amount of wages to a workman employed by the Contractor or his subcontractor in execution of the work or to incur any expenditure on account of the Contingent, liability of the DFCCIL due to the contractor's failure to fulfil his statutory obligations under the aforesaid Act or the rules the DFCCIL will recover from the Contractor, the amount of wages so paid or the amount of expenditure so incurred, and without prejudice to the rights of the DFCCIL under the section 20, sub-section (2) and section 2, sub-section (4) of the aforesaid Act, the DFCCIL shall be at liberty to recover such amount or part thereof by deducting it from the security deposit and/or from any sum due by the DFCCIL to the contractor whether under the contract or otherwise. The DFCCIL shall not be bound to contest any claim made against it under sub-section of section 20 and sub-section (4) of section 21 of the aforesaid Act except on the written request of the contractor and upon his giving to the DFCCIL full security for all costs for which the DFCCIL might become liable in contesting such claim. The decision of the DFCCIL regarding the amount actually recoverable from the contractor as stated above shall be final and binding on the Contractor.

55B. Provisions of Employees Provident Fund and Miscellaneous Provisions Act, 1952 :

The Contractor shall comply with the provisions of Para 30 & 36- B of the Employees Provident Fund Scheme, 1952; Para 3 & 4 of Employees' Pension Scheme, 1995; and Para 7 & 8 of Employees Deposit Linked Insurance Scheme, 1976; as modified from time to time through enactment of "Employees Provident Fund & Miscellaneous Provisions Act, 1952", wherever applicable and shall also indemnify the DFCCIL from and against any claims under the aforesaid Act and the Rules.

55C. (i) Contractor is to abide by the provisions of various labour laws in terms of above clause 54, 55, 55-A and 55-B of the General Conditions of Contract. In order to ensure the same, an application has been developed and hosted on website. Contractor shall register his firm/company etc. and upload requisite

details of labour and their payment in this portal. These details shall be available in public domain. The registration/ updation in Portal shall be done as under:

- a) Contractor shall apply for onetime registration of his company/firm etc. in the Shramik kalyan portal with requisite details subsequent to issue of Letter of Acceptance. Engineer shall approve the contractor's registration in the portal within 7 days of receipt of such request.
- b) Contractor once approved by any Engineer, can create password with login ID (PAN No.) for subsequent use of portal for all Letter of Acceptances (LoAs) issued in his favour.
- c) The contractor once registered on the portal, shall provide details of his Letter of Acceptances (LoAs) / Contract Agreements on shramik kalyan portal within 15 days of issue of any LoA for approval of concerned Engineer. Engineer shall update (if required) and approve the details of LoA filled by contractor within 7 days of receipt of such request.
- d) After approval of LoA by Engineer, contractor shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on shramik kalyan portal on monthly basis.
- e) It shall be mandatory upon the contractor to ensure correct and prompt uploading of all salient details of engaged contractual labour & payments made thereof after each wage period.
- (ii) While processing payment of any 'On Account Bill' or 'Final Bill' or release of 'Advances' or 'Performance Guarantee / Security Deposit', contractor shall submit a certificate to the Engineer or Engineer's representatives that "I have uploaded the correct details of contract labours engaged in connection with this contract and payments made to them during the wage period in Shramik kalyan portal till ___Month, ___Year."

55D. Provisions of "The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996" and "The Building and Other Construction Workers' Welfare Cess Act, 1996" :

The tenderers, for carrying out any construction work, must get themselves registered with the Registering Officer under Section-7 of the Building and Other Construction Workers Act, 1996 and rules made thereto by the concerned State Govt. and submit certificate of Registration, issued from the Registering Officer of the concerned State Govt. (Labour Dept.). The Cess shall be deducted from contractor's bills as per provisions of the Act.

56.0 Reporting of Accidents of Labour:-The Contractor shall be responsible for the safety of all employees directly or through petty contractors or sub- contractor employed by him on the works and shall report serious accidents to any of them however and wherever occurring on the works to the Engineer or the Engineers Representative and shall made every arrangements to render all possible assistance.

57.0 Provision of Workmen's Compensation Act:- In every case in which by virtue of the provisions of section 12 sub-section (1) of the Workmen's Compensation Act 1923, DFCCIL is obliged to pay compensation to a workman directly or through petty contractor or subcontractor employed by the Contractor in executing the work, DFCCIL will recover from the Contractor the amount of the

- (1) compensation so paid, and, without prejudice to the rights of DFCCIL under Section 12 Sub-section of the said Act, DFCCIL shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by DFCCIL to the Contractor whether under these conditions or otherwise, DFCCIL shall not be bound to contest any claim made against it under Section 12 Sub-section (1) of the said Act except on the written request of the Contractor and upon his giving to DFCCIL full security for all costs for which DFCCIL might become liable in consequence of contesting such claim.

57A. Provision of Mines Act:- The contractor shall observe and perform all the provisions of the Mines Act, 1952 or any statutory modifications or re-enactment thereof for the time being in force and any rules and regulations made there under in respect of all the persons directly or through the petty contractors or sub-contractors employed by him under this contract and shall indemnify the DFCCIL from and against any claims under the Mines Act, or the rules and regulations framed there under, by or on behalf of any persons employed by him or otherwise.

58.0 DFCCIL not to provide quarters for Contractors:-No quarters shall normally be provided by the DFCCIL for the accommodation of the contractor or any of his staff employed on the work.

59.(1) Labour Camps:- The contractor shall at his own expense make adequate arrangements for the housing, supply of drinking water and provision of latrines and urinals for his staff and workmen, directly or through the petty contractors or sub-contractors and for temporary crèche (Bal-mandir) where 50 or more women are employed at a time. Suitable sites on DFCCIL land, if available, may be allotted to the contractor for the erection of labour camps, either free of charge or on such terms and conditions that may be prescribed by the DFCCIL. All camp sites shall be maintained in clean and sanitary conditions by the contractor at his own cost.

59.(2) Compliance to rules for employment of labour:- The contractor(s) shall conform to all laws, by-laws rules and regulations for the time being in force pertaining to the employment of local or imported labour and shall take all necessary precautions to ensure and preserve the health and safety of all staff employed directly or through petty contractors or sub-contractors on the works.

59.(3) Preservation of peace:- The contractor shall take requisite precautions and use his best endeavors to prevent any riotous or unlawful behavior by or amongst his workmen and other employed directly or through the petty contractors or sub-contractors on the works and for the preservation of peace and protection of the inhabitants and security of property in the neighborhood of the works. In the event of the DFCCIL requiring the maintenance of a special Police Force at or in the vicinity of the site during the tenure of works, the expenses thereof shall be borne by the contractor and if paid by the DFCCIL shall be recoverable from the contractor.

59.(4) Sanitary arrangements:- The contractor shall obey all sanitary rules and carry out all sanitary measures that may from time to time be prescribed by DFCCIL and permit inspection of all sanitary arrangements at all times by the Engineer, the Engineer's Representative of the DFCCIL. Should the contractor fail to make the adequate sanitary arrangements, these will be provided by the DFCCIL and the cost therefore

recovered from the contractor.

- 59.(5) **Outbreak of infectious disease:-** The contractor shall remove from his camp such labour and their families as refuse protective inoculation and vaccination when called upon to do so by the Engineer or the Engineer's representative on the advice of the DFCCIL. Should cholera, plague or other infectious disease break out, the contractor shall burn the huts, beddings, clothes and other belongings of or used by the infected parties and promptly erect new huts on health sites as required by the engineer, failing which within the time specified in the Engineer's requisition, the work may be done by the DFCCIL and the cost therefore recovered from the contractor.
- 59.(6) **Deleted**
- 59.(7) **Medical facilities at site:** - The Contractor shall provide medical facilities at the site as may be prescribed by the Engineer on the advice of the DFCCIL in relation to the strength of the Contractor's resident staff and workmen.
- 59.(8) **Use of intoxicants:** - The sale of ardent spirits or other intoxicating beverages upon the work or in any of the buildings, encampments or tenements owned, occupied by or within the control of the contractor or any of his employees shall be forbidden and the Contractor shall exercise his influence and authority to the utmost extent to secure strict compliance with this condition.
- 59.(9) **Non-employment of female labour:** - The Contractor shall see that the employment of female labour on / in Cantonment areas, particularly in the neighborhood of soldier's barracks, should be avoided as far as possible.
- 59.(10) **Restrictions On The Employment of Retired Engineers of Railway Services /DFCCIL within one Year of their Retirement :** The Contractor shall not, if he is a retired Government Engineer of Gazetted rank, himself engage in or employ or associate a retired Government Engineer of Gazetted rank, who has not completed one year from the date of retirement, in connection with this contract in any manner whatsoever without obtaining prior permission of the MD DFCCIL and if the Contractor is found to have contravened this provision it will constitute a breach of contract and administration will be entitled to terminate the contract and forfeit Bid Security Deposits, Performance Guarantee (PG) and Security Deposits (SD) of that contract.
- 60.(1) **Non-employment of labours below the age of 15:-** the Contractor shall not employ children below the age of 15 as labourers directly or through petty contractors or subcontractors for the execution of work.
- 60.(2) **Medical Certificate of fitness for labour:** - It is agreed that the contractor shall not employ a person above 15 and below 19 years of age for the purpose of execution of work under the contract unless a medical certificate of fitness in the prescribed form (Proforma at Form No.15) granted to him by a certifying surgeon certifying that he is fit to work as an adult is obtained and kept in the custody of the

contractor or a person nominated by him in this behalf and the person carries with him, while at work; a token giving a reference to such certificate. It is further agreed that the responsibility for having the adolescent examined medically at the time of appointment or periodically till he attains the age of 19 years shall devolve entirely on the contractor and all the expenses to be incurred on this account shall be borne by him and no fee shall be charged from the adolescent or his parent for such medical examination.

60.(3) Period of validity of medical fitness certificate: - A certificate of fitness granted or renewed for the above said purposes shall be valid only for a period of one year at a time. The certifying surgeon shall revoke a certificate granted or renewed if in his opinion the holder of it is, no longer fit for work in the capacity stated therein. Where a certifying surgeon refuses to grant or renew a certificate or revoke a certificate, he shall, if so required by the person concerned, state his reasons in writing for doing so.

60.(4) Medical re-examination of labourer:- Where any official appointed in this behalf by the Ministry of labour is of the opinion that any person employed in connection with the execution of any work under this contract in the age group 15 to 19 years is without a certificate of fitness or is having a certificate of fitness but no longer fit to work in the capacity stated in the certificate, he may serve on the Contractor, or on the person nominated by him in the regard, a notice requiring that such persons shall be examined by a certifying surgeon and such person shall not if the concerned official so directs, be employed or permitted to do any work under this contract unless he has been medically examined and certified that he has been granted a certificate of fitness or a fresh certificate of fitness, as the case may be.

EXPLANATIONS:-

- (1) Only qualified medical practitioners can be appointed as “Certifying Surgeons” and the term “Qualified Medical Practitioners” means a person holding a qualification granted by an authority specified in the Schedule to the Indian Medical Degrees Act, 1916 (VII to 1916) or in the Schedule to the Indian Medical Council Act, 1933 (XXVII) of 1933.
- (2) The Certifying surgeon may be a medical officer in the service of State or Municipal Corporation.

DETERMINATION OF CONTRACT

61.(1) Right of DFCCIL of determine the contract:- The DFCCIL shall be entitled to determine and terminate the contract at any time should, in the DFCCIL’s opinion, the cessation of work becomes necessary owing to paucity of funds or from any other cause whatever, in which case the value of approved materials at site and of work done to date by the Contractor will be paid for in full at the rate specified in the contract. Notice in writing from the DFCCIL of such determination and the reasons therefor shall be conclusive evidence thereof.

61.(2) Payment on determination of contract:- Should the contract be determined under sub clause (1) of this clause and the Contractor claims payment for expenditure incurred by him in the expectation of completing the whole of the work, the DFCCIL shall admit and consider such claims as are deemed reasonable and are supported by vouchers to the satisfaction of the Engineer. The DFCCIL’s decision

on the necessity and propriety of such expenditure shall be final and conclusive.

61.(3) The contractor shall have no claim to any payment of compensation or otherwise, howsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequence of determination of contract.

62.(1) Determination of contract owing to default of contractor:- If the Contractor should:-

- (i) Becomes bankrupt or insolvent, or
- (ii) Make an arrangement with of assignment in favour of his creditors, or agree to carry out the contract under a Committee of Inspection of his creditors, or
- (iii) Being a Company or Corporation, go into liquidation (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), or
- (iv) Have an execution levied on his goods or property on the works, or
- (v) Assign the contract or any part thereof otherwise than as provided in Clause 7 of these conditions, or
- (vi) Abandon the contract, or
- (vii) Persistently disregard the instructions of the Engineer, or contravene any provision of the contract, or
- (viii) Fail to adhere to the agreed programme of work by a margin of 10% of the stipulated period, or

- (ix) Fail to Execute the contract documents in terms of Para 1.3.9 of the Instructions to Tenderers.
- (x) Fail to submit the documents pertaining to identity of JV and PAN in terms of Para 65.11 of Chapter IV General Conditions of Contract (GCC) Part I.
- (xi) Fail to remove materials from the site or to pull down and replace work after receiving from the Engineer notice to the effect that the said materials or works have been condemned or rejected under clause 25 and 27 of these conditions, or

- (xii) Fail to take steps to employ competent or additional staff and labour as required under clause 26 of the conditions
- (xiii) Fail to afford the Engineer or Engineer's representative proper facilities for inspecting the work or any part thereof as required under clause 28 of the conditions, or
- (xiv) Promise, offer or give any bribe, commission, gift or advantage either himself or through his partner, agent or servant to any officer or employee of the DFCCIL or to any person on his or on their behalf in relation to the execution of this or any other contract with DFCCIL.
- (xv)(A) At any time after the tender relating to the contract, has been signed and submitted by the Contractor, being a partnership firm admit as one of its partners or employee under it or being an incorporated company elect or nominate or allow to act as one of its directors or employee under it in any capacity whatsoever any retired engineer of the gazetted rank or any other retired gazetted officer working before his retirement, whether in the executive or administrative capacity, or whether holding any pensionable post or not, in the DFCCIL for the time being owned and administered by the President of India before the expiry of one year from the date of retirement from the said service of such Engineer or Officer unless such Engineer or Officer has obtained permission from the DFCCIL or any officer duly authorized

in this behalf to become a partner or a director or to take employment under the contract as the case may be, or

(xv) **(B) Fail to give at the time of submitting the said tender:-**

- (a) The correct information as to the date of retirement of such retired engineer or retired officer from the said service, or as to whether any such retired engineer or retired officer was under the employment of the Contractor at the time of submitting the said tender, or
- (b) The correct information as to such engineers or officers obtaining permission to take employment under the contractor, or
- (c) Being a partnership firm, the correct information as to, whether any of its partners was such a retired engineer or a retired officer, or
- (d) Being in incorporated company, correct information as to whether any of its directors was such a retired engineer or a retired officer, or
- (e) Being such a retired engineer or retired officer suppress and not disclose at the time of submitting the said tender the fact of his being such a retired engineer or a retired officer or make at the time of submitting the said tender a wrong statement in relation to his obtaining permission to take the contract or if the contractor be a partnership firm or an incorporated company to be a partner or director of such firm or company as the case may be or to seek employment under the contractor.

Then and in any of the said clause, the Engineer on behalf of the DFCCIL may serve the Contractor with a notice (Proforma at Form No.16) in writing to that effect and if the contractor does not within seven days after the delivery to him such notice proceed to make good his default in so far as thereof being made good and carry on the work or comply with such directions as aforesaid of the entire satisfaction of the Engineer, the DFCCIL shall be entitled after giving 48 hour's notice (Proforma at Form No. 17 or 17A) in writing under the hand of the Engineer to rescind the contract as a whole or in part or parts (as may be specified in such notice) and after expiry of 48 hour's notice, a final termination notice (Proforma at Form No. 18 or 18A) should be issued and adopt the following courses:

To measure up or the whole or part of the work from which the contractor has been removed and get it completed by another contractor, the manner and method in which such work is completed shall be in the entire discretion of the Engineer whose decision shall be final.

Note: Engineer at his discretion may resort to the part termination of contract with notices (Proforma at Form No. 16, 17 & 18), only in cases where progress of work is more than or equal to 80% of the original scope of work.

62.(2) Right of DFCCIL after, rescission of contract owing to default of contractor:

In the event of any or several of the courses, referred to in sub-clause (1) of the clause, being adopted.

- (a) the contractor shall have no claim to compensation for any loss sustained by him by reason of his having

purchased or procured any materials or entered into any commitments or made any advances on account of or with a view to the execution of the works or the performance of the contract and contractor shall not be entitled to recover or be paid any sum for any work thereto for actually performed under the contract unless and until the Engineer shall have certified the performance of such work and the value payable in respect thereof and the contractor shall only be entitled to be paid the value so certified.

- (b) In the contract which has been rescinded as a whole, the Security Deposit already with DFCCIL under the contract shall be encashed/ forfeited and the Performance Guarantee already submitted for the contract shall be encashed. The balance work shall be got done independently without risk & cost of the failed Contractor. The failed Contractor shall be debarred from participating in the tender for executing the balance work. If the failed Contractor is a JV or a Partnership firm, then every member/partner of such a firm shall be debarred from participating in the tender for the balance work in his/her individual capacity or as a partner of any other JV /partnership firm.
Further the authorized representative of failed Contractor cannot be accepted as authorized representative in new contract.
- (c) In the contract rescinded in part or parts,
- (i) The full Performance Guarantee available for the contract shall be recovered. No additional Performance Guarantee shall be required for balance of work being executed through the part terminated contract. The contract value of part terminated contract stands reduced to the balance value of work under the contract.
- (ii) The Security Deposit of part terminated contract shall be dealt as per clause 16(2) of these Conditions.
- (iii) The defaulting Contractor shall not be issued any completion certificate for the contract.
- (iv) The balance work shall be got done independently without risk & cost of the failed Contractor. The failed Contractor shall be debarred from participating in the tender for executing the balance work. If the failed Contractor is a JV or a Partnership firm, then every member/partner of such a firm shall be debarred from participating in the tender for the balance work in his/her individual capacity or as a partner of any other JV /partnership firm.
- (v) Further the authorized representative of failed Contractor will not be accepted as authorized representative in new contract.
- (d) The Engineer or the Engineer's representative shall be entitled to take possession of any materials, tools, implements, machinery and buildings on the works or on the property on which these are being or ought to have been executed, and to retain and employ the same in the further execution of the works or any part thereof until the completion of the works without the contractor being entitled to any compensation for the use and employment thereof or for wear and tear or destruction thereof.
- (e) The Engineer shall as soon as may be practicable after removal of the contractor fix and determine ex-parte or by or after reference to the parties or after such investigation or enquiries as he may consider fit to make or institute and shall certify what amount (if any) had at the time of rescission of the contract

been reasonably earned by or would reasonably accrue to the contractor in respect of the work then actually done by him under the contract and what was the value of any unused, or partially used materials, any constructional plan and any temporary works upon the site. The legitimate amount due to the contractor after making necessary deductions and certified by the Engineer should be released expeditiously.

STATEMENT OF DISPUTES - DFCCIL ARBITRATION RULES

63.0 Conciliation of Disputes:

- (i) This clause is applicable in the tender having advertised value less than or equal to Rs 50 (Fifty) Crore.
- (ii) All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the work or after its completion and whether before or after the determination of the contract, shall be referred by the Contractor to the " Director /Chief General Manager/CPM, DFCCIL " through "Notice of Dispute" provided that no such notice shall be served later than 30 days after the date of issue of Completion Certificate by the Engineer. Director /Chief General Manager/CPM, DFCCIL shall, within 30 days after receipt of the Contractor's "Notice of Dispute", notify the name of conciliator(s) to the Contractor.
- (iii) The Conciliator(s) shall assist the parties to reach an amicable settlement in an independent and impartial manner within the terms of contract.
- (iv) In case the total value of all claims in dispute added together does not exceed Rs. One Crore, the number of Conciliator shall be one. For claims more than Rs. One Crore and upto Rs. Fifty Crore, the number of Conciliators shall be three.
- (v) The Sole Conciliator shall be nominated by the MD DFCCIL from the List of Empaneled Arbitrators /Conciliators maintained by DFCCIL. The sole arbitrator shall be appointed within 60 days from the day when a written and valid demand for arbitration is received by CGM/Director/MD DFCCIL.
- (vi) In case, the Conciliation process consist of a panel of three members, the DFCCIL will send a panel of at least four (4) names from the List of Empaneled Arbitrators /Conciliators with DFCCIL empaneled to work as Arbitrator /Conciliator to the Contractor within 60 days from the day when a written and valid demand for arbitration is received by the CGM/Director/MD DFCCIL. Contractor will be asked to suggest to MD DFCCIL at least 2 names out of the panel for appointment as Contractor's nominee within 30 days from the date of dispatch of the request by DFCCIL. The MD shall appoint at least one out of them as the Contractor's nominee and will, also simultaneously appoint the balance number of arbitrators either from the panel or from outside the panel, duly indicating the 'presiding conciliator' from amongst the 3 conciliators so appointed. MD DFCCIL shall complete this exercise of appointing the Conciliation Panel within 30 days from the receipt of the names of Contractor's nominees.
- (vii) If the parties reach agreement on a settlement of the dispute, they shall draw up and sign a written settlement agreement duly signed by Engineer In-charge, Contractor and conciliator(s). When the parties sign the settlement agreement, it shall be final and binding on the parties.
- (viii) The parties shall not initiate, during the conciliation proceedings, any arbitral or judicial proceedings in respect of a dispute that is the subject matter of the conciliation proceedings.
- (ix) The conciliation proceedings shall be subject to the provisions of the Arbitration and Conciliation Act

1996 and its amendments thereof.

- 63.1 **Matters Finally Determined by the DFCCIL:** All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during the progress of the work or after its completion and whether before or after the determination of the contract, shall be referred by the Contractor to the MD/ Director /Chief General Manager/CPM, DFCCIL and the MD/ Director /General Manager/CPM, DFCCIL shall, within 120 days after receipt of the Contractor's representation, make and notify decisions on all matters referred to by the Contractor in writing provided that matters for which provision has been made in Clauses 7(j), 8, 18, 22(5),39.1, 39.2, 40A,43(2), 45(i)(a), 55, 55-A(5), 57, 57A,61(1), 61(2),62(1), 63(iv) and 63.2.11 of the General Conditions of Contract or in any Clause (stated as excepted matter) of the Special Conditions of the Contract, shall be deemed as 'excepted matters' (matters not arbitrable)and decisions of the DFCCIL authority, thereon shall be final and binding on the Contractor; provided further that 'excepted matters' shall stand specifically excluded from the purview of the Conciliation, Dispute Adjudication Board (DAB) and Arbitration.
- 63.2 **Dispute Adjudication Board (DAB):** This clause is applicable in the tender having advertised value more than Rs 50 Crore.

- 63.2.1 Any dispute/s if not settled with the Engineer, shall be referred to DAB.

The DAB shall consist of a panel of three Adjudicators from the List of Empanelled Arbitrators/Conciliators maintained by DFCCIL. The DAB shall be formed within 90 days of signing of Contract Agreement. For this purpose, a panel of DAB members shall be maintained in the DFCCIL Corporate Office, New Delhi. The complete panel, which shall not be less than five members, shall be sent by CGM/GM DFCCIL to the Contractor to nominate one member of the DAB from the panel as Contractor's nominee within two weeks of receipt of the panel. On receipt of Contractor's nominee, the MD DFCCIL shall nominate one member from the same panel as DFCCIL nominee for the DAB. Both above nominees shall jointly select presiding member of the DAB from the same panel.

- 63.2.2 The appointment of DAB shall be effectuated by way of a tri-partite agreement among the DFCCIL, Contractor and the respective DAB members. The terms of the remuneration of each member shall be as fixed by DFCCIL from time to time. Each party shall be responsible for paying one-half of this remuneration.
- 63.2.3 If one or more of the members appointed refuses to act as DAB member, or is unable or unwilling to perform his functions as DAB member for any reason whatsoever or dies or in the opinion of the Director/MD fails to act without undue delay, the parties shall terminate the mandate of such DAB member and thereupon new DAB member shall be appointed in the same manner, as the outgoing DAB member had been appointed.

- 63.2.4 The appointment of any member may be terminated by mutual agreement of both Parties, but not by the DFCCIL or the Contractor acting alone. Unless otherwise agreed by both the Parties, the appointment of the DAB (including each member) shall expire upon expiry of this Contract Agreement.
- 63.2.5 Before start of DAB proceedings, each DAB member shall give the following certificate to the DFCCIL and the Contractor:
- “I have no any past or present relationship in relation to the subject matter in dispute, whether financial, business, professional or other kind. Further, I have no any past or present relationship with or interest in any of the parties whether financial, business, professional or other kind, which is likely to give rise to justifiable doubts as to my independence or impartiality.”*
- 63.2.6 DAB proceedings shall be conducted as decided by the DAB. The DAB shall give its decision within 84 days of a Dispute referred to it by any of the Parties, duly recording the reasons before arriving at the decision. The DAB shall decide the issue within terms and conditions of the contract. This time limit shall be extendable subject to the Parties mutual agreement.
- 63.2.7 In case any party is not satisfied by the decision of DAB, then the aggrieved party may, within 28 days after receiving the decision, give notice to the other Party of its dissatisfaction. If the DAB has given its decision as to a matter in dispute to both Parties, and no notice of dissatisfaction has been given by either Party within 28 days after its received the DAB’s decision, then the decision shall become final and binding upon the Parties.
- 63.2.8 No dispute shall be referred to Arbitral Tribunal unless the same has been referred to DAB for adjudication. However, in case DAB is not formed due to any reason, the disputes can be directly referred to Arbitral Tribunal to adjudicate the dispute.
- 63.2.9 In the specific cases of any misconduct by any of the members of the DAB, the parties shall have the right to specifically bring it to the notice of the DAB such conduct, through a statement filed with necessary documents in proof of such misconduct and the DAB, after taking NOTICE of such conduct initiate the replacement of the member concerned, in the same manner the member to be replaced was appointed.
- 63.2.10 Once the decision is given by DAB, DAB cannot review the decision at its own or on the request of one party, unless both parties agree for review of decision by DAB.
- 63.2.11 In case DAB decision is not challenged, or no Notice of Dissatisfaction has been issued by either Party within 28 days of receipt of decision of DAB, the decision shall be considered as final and parties would be barred for referring the same to Arbitral Tribunal for adjudication.
- 63.2.12 The obligation of the DFCCIL and the Contactor shall not be altered by reasons of issue being or under reference to DAB.
- 63.2.13 The DAB shall conduct the proceedings at any convenient venue which shall be decided by DAB in consultations with parties.

63.2.14 It is a term of this contract that the Parties shall not approach any Court of Law for settlement of such disputes or differences unless an attempt has first been made by the parties to settle such disputes or differences through DAB and Arbitral Tribunal.

64. (1) Demand for Arbitration:-

64. (1) (i) (a) In the event of any dispute or difference between the parties hereto as to the construction or operation of this contract, or the respective rights and liabilities of the parties on any matter in question, dispute or difference on any account or as to the withholding by the DFCCIL of any certificate to which the contractor may claim to be entitled to, or if the DFCCIL fails to make a decision within 120 days, then and in any such case, but except in any of the 'excepted matters' referred to in clause 63 of these conditions, the contractor, after 120 days but within 180 days of his presenting his final claim on disputed matters shall demand in writing that the dispute or difference be referred to arbitration.

64. (1) (i) (b) A dispute, unless settled through Conciliation or in which DAB's decision has become final and binding, shall be finally settled by Arbitration as per Arbitration and Conciliation Act 1996 and its amendments thereof.

64.(1) (ii) The demand for arbitration shall specify the matters which are in question, or subject of the dispute or difference as also the amount of claim item wise. Only such dispute or difference, in respect of which the demand has been made, together with counter claims or set off, given by the DFCCIL, shall be referred to arbitration and other matters shall not be included in the reference.

64.(1) (iii) (a) The arbitration proceedings shall be assumed to have commenced from the day, a written and valid demand for arbitration is received by the DFCCIL.

(b) The claimant shall submit his claim stating the facts supporting the claims along with all the relevant documents and the relief or remedy sought against each claim within a period of 30 days from the date of appointment of the Arbitral Tribunal.

(c) The DFCCIL shall submit its defence statement and counter claim(s), if any, within a period of 60 days of receipt of copy of claims from Tribunal thereafter, unless otherwise extension has been granted by Tribunal.

(d) The seat of arbitration would be New Delhi. However, the venue for arbitration meetings or hearings can be any other place with the consent of parties.

(e) Both the parties shall submit to the jurisdiction of the courts situated at New Delhi for the purpose of actions and proceedings arising out of the contract and the courts at Delhi shall have the sole and exclusive jurisdiction to hear and decide such actions and proceedings.

64.(1)(iv) No new claim shall be added during proceedings by either party. However, a party may amend or

supplement the original claim or defense thereof during the course of arbitration proceedings subject to acceptance by Tribunal having due regard to the delay in making it.

64.(1)(v) If the contractor(s) does/do not prefer his/their specific and final claims in writing, within a period of 90 days of receiving the intimation from the DFCCIL that the final bill is ready for payment, he/they will be deemed to have waived his/their claim(s) and the DFCCIL shall be discharged and released of all liabilities under the contract in respect of these claims.

64.(2) Obligation During Pendency of Arbitration:– Work under the contract shall, unless otherwise directed by the Engineer, continue during the arbitration proceedings, and no payment due or payable by the DFCCIL shall be withheld on account of such proceedings, provided, however, it shall be open for Arbitral Tribunal to consider and decide whether or not such work should continue during arbitration proceedings.

64.(3) Appointment of arbitrator

64.(3)(a): In cases where the total value of all claims in question added together does not exceed ₹1,00,00,000/- (Rupees One Crore), the Arbitral Tribunal shall consist of a Sole Arbitrator from the List of Empanelled Arbitrators, nominated by the MD DFCCIL. The sole arbitrator shall be appointed within 60 days from the day when a written and valid demand for arbitration is received by CGM/Director/MD DFCCIL.

64.(3)(b): In cases not covered by the Clause 64(3)(a), the Arbitral Tribunal shall consist of a panel of three members, as the arbitrators. For this purpose, the DFCCIL will send a panel of at least four (4) names from the List of Empanelled Arbitrators with DFCCIL empanelled to work as Arbitrator to the Contractor within 60 days from the day when a written and valid demand for arbitration is received by the CGM/Director/MD DFCCIL.

Contractor will be asked to suggest to MD DFCCIL at least 2 names out of the panel for appointment as Contractor's nominee within 30 days from the date of dispatch of the request by DFCCIL. The MD DFCCIL shall appoint at least one out of them as the Contractor's nominee and will, also simultaneously appoint the balance number of arbitrators either from the panel or from outside the panel, duly indicating the 'presiding arbitrator' from amongst the 3 arbitrators so appointed. MD DFCCIL shall complete this exercise of appointing the Arbitral Tribunal within 30 days from the receipt of the names of Contractor's nominees.

64.(3)(c)(i): If one or more of the arbitrators appointed as above refuses to act as arbitrator, withdraws from his office as arbitrator, or vacates his/their office/offices or is/are unable or unwilling to perform his functions as arbitrator for any reason whatsoever or dies or in the opinion of the MD DFCCIL fails to act without undue delay, the MD DFCCIL shall appoint new arbitrator/arbitrators to act in his/their place in the same manner in which the earlier arbitrator/arbitrators had been appointed. Such re-constituted Tribunal may, at its discretion, proceed with the reference from the stage at which it was left by the previous arbitrator (s).

64.(3) (c) (ii): (a) The Arbitral Tribunal shall have power to call for such evidence by way of affidavits or otherwise as the Arbitral Tribunal shall think proper, and it shall be the duty of the parties hereto to do

or cause to be done all such things as may be necessary to enable the Arbitral Tribunal to make the award without any delay. The proceedings shall normally be conducted on the basis of documents and written statements.

(b) Before proceeding into the merits of any dispute, the Arbitral Tribunal shall first decide and pass its orders over any plea submitted/objections raised by any party, if any, regarding appointment of Arbitral Tribunal, validity of arbitration agreement, jurisdiction and scope of the Tribunal to deal with the dispute (s) submitted to arbitration, applicability of time 'limitation' to any dispute, any violation of agreed procedure regarding conduct of the arbitral proceedings or plea for interim measures of protection and record its orders in day to day proceedings. A copy of the proceedings duly signed by all the members of tribunal should be provided to both the parties.

64.3(c)(iii): While appointing arbitrator(s) under Sub-Clause 64.(3)(a) & 64.(3)(b) above, due care shall be taken that he/they is/are not the one/those who had an opportunity to deal with the matters to which the contract relates or who in the course of his/their duties as DFCCIL/Railway servant(s) expressed views on all or any of the matters under dispute or differences. A certification to this effect as per Form no.27 shall be taken from Arbitrators also. The proceedings of the Arbitral tribunal or the award made by such Tribunal will, however, not be invalid merely for the reason that one or more arbitrators had, in the course of his service, opportunity to deal with the matters to which the contract relates or who in the course of his/their duties expressed views on all or any of the matters under dispute.

64.(3)(d)(i): The arbitral award shall state item wise, the sum and reasons upon which it is based. The analysis and reasons shall be detailed enough so that the award could be inferred therefrom.

64.(3)(d)(ii): A party may apply for corrections of any computational errors, any typographical or clerical errors or any other error of similar nature occurring in the award of a Tribunal and interpretation of a specific point of award to Tribunal within 60 days of receipt of the award.

64.(3)(d)(iii): A party may apply to Tribunal within 60 days of receipt of award to make an additional award as to claims presented in the arbitral proceedings but omitted from the arbitral award.

64.(4): In case of the Tribunal, comprising of three members, any ruling on award shall be made by a majority of members of Tribunal. In the absence of such a majority, the views of the Presiding Arbitrator shall prevail.

64.(5): Where the arbitral award is for the payment of money, no interest shall be payable on whole or any part of the money for any period till the date on which the award is made.

64.(6): The cost of arbitration shall be borne by the respective parties. The cost shall inter-alia include fee of the arbitrator(s), as per the rates fixed by DFCCIL from time to time and the fee shall be borne equally by both the parties, provided parties sign an agreement in the format given at Form no.27 to these conditions after/ while referring these disputes to Arbitration. Further, the fee payable to the arbitrator(s) would be governed by the instructions issued on the subject by DFCCIL from time to time irrespective of the fact whether the arbitrator(s) is/are appointed by the DFCCIL or by the court of law unless specifically directed by Hon'ble court otherwise on the matter.

- 64.(7)** Subject to the provisions of the aforesaid Arbitration and Conciliation Act 1996 (as amended up to date) and the rules thereunder and relevant para of the General Conditions of Contract and any statutory modifications thereof shall apply to the appointment of arbitrators and arbitration proceedings under this Clause.
- 64.(8)** In case arbitration award is challenged by a party in the Court of Law, 75% of award amount, pending adjudication by Court of Law, shall be made by party to other party. In case payment is to be made by DFCCIL to Contractor, the terms & conditions as incorporated in the DFCCIL Policy as amended from time to time, shall be followed. In case Contractor has to pay to the DFCCIL, then 75% of the award amount shall be deducted by the DFCCIL from the Contractor's bills, Performance Guarantee/ Security Deposit, or any other dues of Contractor with the Government of India.

SPECIAL CONDITIONS OF CONTRACT (SCC)

Construction of RCC Pipe bridges(17nos) of 1600mm inner Diameter at Scattered locations by Micro tunnelling Method below IR and DFC Embankment besides existing Minor Bridges parallel along with Diva-Vasai Section of Central Railway for JNPT-Vaitarana Section of DFCCIL).

PART I

Chapter- V

SPECIAL CONDITIONS OF CONTRACTS (General)

SCOPE OF WORK AND GENERAL FEATURE OF THE TENDER

1. Scope of Present Tender:-

The Permanent Works under this contract shall include but not be limited to the following :

- A.** Design, manufacture and supply of reinforced cement concrete rubber ring jointed jacking pipes or other suitable pipes as approved by the Engineer of various diameters.
- B.** Preparation of detailed design & Drawings of RCC pipes (NP-04), & Execution Methodology and approval of the same from Railway as well as DFCCIL.
- C.** Design & Drawings (GAD and detailed drawings), procurement and installation of RCC jacking pipes (Min. NP 4 class) suitable for 32.5T axle load and cushion varies from 6M to 12M. Proof check of the same will be obtained from IIT/VJTI/ any other Govt. Engineering College. Approval will be given by Engineer-in-charge.
- D.** The installation of complete of reinforced cement concrete pipeline pipes or other pipes including fittings or specials as specified and as approved by the Engineer in the following distinct fronts under the contract.
- E.** Trenching work of Nalah including diversion and connections to new pipe duly pushed below IR tracks & DFC tracks on US/DS.
- F.** Closing of pipes bridges of existing units plum concrete by suitable method duly approved by the Engineer-in-Charge.
- G.** Coordination / liaison with Central Railway to obtain approvals/working permission for pipe pushing, if necessary or otherwise, wherever required.

- H.** The work shall be carried out by trenchless technology/Micro tunnelling method with skilled/competent / qualified technical staff.
- I.** The work shall be carried out with all safety precautions without affecting the line, level and alignment of running Railway tracks.
- J.** Any damages to the IR/DFCCIL properties during work have to be restored by Contractor immediately on his risk and cost. The work shall be carried out under strict & continuous supervision of competent Site Engineer ensuring the safety precautions & coordination with Railway department.
- K.** Ancillary and incidental works and all necessary works required to complete the work successfully and to entire satisfaction to the Engineer within stipulated time.
- L.** The work will have to be done in a planned manner with advance arrangements of required machineries, equipment and materials. Contractor will have to plan and execute the work at multiple locations simultaneously by deploying multiple machines and required resources.
- M.** Carrying out work and testing of materials shall be as per specifications relevant related IS codes/BIS/IRS/MORTH/DSO. Standard amendment up to date till the title of opening of Tender.
- N.** Additional site requirements given by the Engineer in-charge within the jurisdiction of CGM/Mumbai South and any other work incidental to the completion of project.
- O.** DFCCIL reserves right to addition/alteration at their own discretion without assigning any reason and contractor is bound to carry out the work.

Note: Scope of work is only indicative and as per requirement which may increase/ decrease as per final approved drawings.

The scope of the tender includes,

2. Other Conditions

- 2.1. All works shall be done only in the presence of DFCCIL Staff.
- (i) It is primary responsibility of the contractor to obtain all necessary permissions, parvanas etc. from all concern authorities such as Local Municipal Authorities, Panchayat, Revenue Department, Traffic Police, etc. However, DFCCIL may provide necessary help for obtaining the permission. Contractor is not entitled for any compensations such as idling of machinery, staff etc. on account of any delay in work for getting these permissions.

- (ii) The proposed sites is close to existing Railway bridge on operational Railway lines on Electrified section. Contractor has to take all necessary care to not make any infringement to running Railway traffic.
- (iii) The excavated material shall not be dumped on the road. It shall be taken away immediately.
- (iv) Contractor has to provide all necessary signages, boards etc. for road traffic diversion if required. Being incidental to work, no extra payment for the same will be made. Contractor has to take all necessary precaution for the safety of the road traffic.
- (v) While doing the work, if any obstruction is met with, such as water pipeline, sewerage, gas pipeline, electrical cable, telephone cable or any other structure which is to be cleared, it will be removed by the Tenderer/Contractor for which necessary payment shall be made to the Contractor.
- (vi) In the section, other works are in progress, Contractor has to co-ordinate with those agencies for executing the work smoothly, without disturbing the work of other agencies.
- (vii) **Reinforcement steel shall be Thermo-Mechanically Treated bar of Fe-500 grade as per IS 1786-2008 manufactured by primary manufacturers viz. SAIL, TISCO, Rashtriya Ispat Nigam Limited (RINL) or Jindal only.**
- (viii) As per concrete bridge code of Railway's, nominal surface/temperature reinforcement shall be provided, in the plain/mass concrete in the sub-structures of bridges such as abutment, piers, face walls, return walls etc., and such concrete shall not be treated as RCC. This will be paid as mass concrete under relevant item and the payment for such surface/temperature reinforcement shall be paid under respective items of steel.
- (ix) There is limited working space; therefore, the tenderer is requested to visit the site to explore the possibility of making sufficient area for stacking materials.
- (x) The activities planned in traffic blocks shall be completed well in traffic block duration only.
- (xi) No payment will be made for underutilisation of overheads, labour, machinery etc.
- (xii) Minimum Testing frequency of various materials is given in technical specification.
- (xiii) The alignment, layout of bridges, RUB, Minor Bridges, Subway shall be given by the contractor engineer with total station survey instrument (Leica or Trimble make) having memory and able to give points in field from stored co-ordinates of points taken from CAD drawing. Electronic Total station survey equipment shall be always available with one experience surveyor at work site for survey work.

4 THE SITE

4.1 GENERAL

- 4.1.1 The DFCCIL alignment between Vaitarna to JNPT is running parallel to the existing Indian railway track. the new bridges proposed to be constructed by micro tunnelling methodology are to be constructed under the Indian Railway formation as well as on the DFCCIL formation. Therefore, for executing of the work the contractor has to work under Indian Railway and under DFCCIL formation. The access to the Indian Railway formation will be provided after getting approval from the Indian Railway and for DFCCIL formation the access will be provided by the DFCCIL.
- 4.1.2 The Site as well as Contractor's equipment shall not be used by the Contractor for any purposes other than for carrying out the Works, except that, with the consent in writing of the Engineer.
- 4.1.3 Ready Mix Concrete plant, if considered essential shall be located with the prior approval of the Engineer. No RMC plant shall be used on the site in violation of local bye laws.

4.1.4 The location and size of each stockpile of materials, including excavated materials, within the Site shall be as permitted by the Engineer. Stockpiles shall be maintained at all times in a safe and stable condition with all documentary records.

4.2 ACCESS TO THE SITE

4.2.1 Access to the Railway & DFCCIL Envelope i.e. the zone or zones within the Works which contain the track, platforms and equipment necessary for the operation of the railway by the Contractor shall be in accordance with any procedures, requirements and conditions laid down by railway and as applicable

4.3 CLEARANCE OF THE SITE

4.3.1 All Temporary Works which are not to remain on the Site after the completion of the Works shall be removed after approval by the Engineer.

4.3.2 The Site shall be cleared and reinstated as stated in the Contract.

5 Damage And Interference

5.1 Work shall be carried out in such a manner that there is no damage to or interference with:

- (i) watercourses or drainage systems;
- (ii) Utilities especially those pertaining to train operations of existing IR system like working signalling, telecommunication, civil, mechanical, electrical etc.;
- (iii) structures (including foundations), roads, or other properties;
- (iv) public or private vehicular or pedestrian access;
- (v) monuments, trees, graves or burial grounds other than to the extent that is necessary for them to be removed or diverted to permit the execution of the Works.
- (vi) Heritage structures shall not be damaged or disfigured on any account.

5.2 The Contractor shall inform the Engineer as soon as practicable of any items which are not stated in the Contract to be removed or diverted but which the Contractor considers need to be removed or diverted to enable the Works to be carried out.

5.3 Such items shall not be removed or diverted until the consent of the Engineer to such removal or diversion has been obtained.

5.4 Items which are damaged or interfered with as a result of the Works and items which are removed to enable work to be carried out shall be reinstated to the satisfaction of the Engineer and to at least the same condition as existed before the work started

5.5 Contractor shall use cable route locator to identify cables within the zone of construction, and ensure its safety during construction activity. If required these be relocated/removed as detailed in para 9.0 below.

5.6 Any claims by utility agencies due to damage of utilities by the Contractor shall be borne by the Contractor. The Contractor shall negotiate a settlement in respect of such claims and indemnify the Engineer and the Railways in respect of all claims, proceedings, damages, costs, charges and expenses in relation thereto.

6 Setting Out, Survey And Fixing Working Bench Marks And Alignment Markers.

- 6.1 The Contractor shall be responsible for the true and proper setting out of the Works and for the correctness of the position, alignment, levels and dimensions of all parts of the Work.
- 6.1.1 The Contractor shall establish a system of horizontal and vertical controls in relation to the reference bench marks and coordinates as specified by the Engineer, as required for the setting out and verifying the position, line, levels and dimensions of the earthworks and drainage works during the execution.
- 6.1.2 The Contractor shall keep updated schedules and drawings of such information and shall submit the same to the Engineer as the setting out proceeds.
- 6.1.3 All bench marks and control points shall be of robust construction, facilitate easy identification and shall be checked regularly for accuracy, carefully protected and maintained in good working condition to the satisfaction of the Engineer, till the completion of the contract.
- 6.1.4 If any of the bench marks or permanent ground markers become displaced or damaged during the Contract, then the Contractor shall re-establish them immediately to the satisfaction of the Engineer and provide the Engineer with the amended position and level details.
- 6.1.5 The Contractor shall not commence any construction activity at the site before obtaining the approval of the Engineer to the setting out of the Site boundaries.
- 6.1.6 The checking of any setting out or any line, level or dimension by the Engineer or the Engineer's representative shall not in any way relieve the Contractor of his responsibility for the correctness thereof.

6.2 SURVEY EQUIPMENT

- 6.2.1 All survey shall be done with Total Stations and high precision Auto levels. The contractor should provide the survey equipment and other accessories as per the instructions of Engineer as and when required. He should also provide all necessary help as required by the Engineer for checking the works, whenever required.
- 6.2.2 Precision automatic levels having a standard deviation of ± 2 mm per km and fitted with micrometre attachment shall be used for all double run levelling works. Setting out of the alignment and measurement of angle and distance shall be done by using Electronic Total Station.

7 UTILITIES

7.1 General

- 7.1.1 The Tenderer for this Work is required to shift all chartered and unchartered utilities coming in the way of alignment. Contractor shall be paid for removal of utilities as per the relevant item in the BOQ. Contractor shall be paid as per the actual work done for removal of unchartered/Chartered utilities based as per relevant item in BOQ, on case-to-case basis.
- 7.1.2 Before removing any utilities Contractor should submit a utility diversion report to the Engineer with the following details, for approval:-
- (i) location of utility;
 - (ii) name and address of the utility owner;
 - (iii) nature and sizes of the utilities;
 - (iv) description and condition of utility;
 - (v) temporary or permanent supports required; and
 - (vi) temporary or permanent diversion required

- (vii) Use of specific construction methods to complete the underground structures around and below the utilities including support of the utilities during construction.
 - (viii) Materials required for removing / relocating the utility.
 - (ix) Time required for removing / relocating the utility.
- 7.1.3 For unchartered utilities - date on which the utilities were encountered and the cost involved based upon the proposed Variation to Contract for removal of such utilities.
- 7.1.4 A utility diversion plan with schedule of utility removal/ relocation shall be prepared by the Contractor and submitted along with the preliminary Design for all utilities. Unchartered utilities shall be included as soon as these are encountered by the Contractor and the plan updated accordingly. The Contractor shall take into consideration the time taken for utility diversions and shall take all steps to enable the utility diversions to proceed in accordance with the overall Works programme.
- 7.1.5 The Contractor shall set up and manage a utility liaison group of experienced personnel for the duration of the Contract which shall maintain close liaison with the utility owners and undertakings.
- 7.1.6 The Contractor shall immediately inform the Engineer and the utility agencies of any
- (i) damage to utilities;
 - (ii) leakage of utilities;
 - (iii) discovery of utilities during excavation work.
- 7.1.7 Work of utility removal shall deem to include the following and shall be done by the Contractor for this Work:-
- (i) Identifying the utilities, their owner and agencies involved in granting clearance for their removal/ relocation.
 - (ii) Preparing plans/ drawings/ applications for their removal/ relocation.
 - (iii) Liaisoning and obtaining necessary clearances from the concerned authorities. DFCCILs shall assist the Contractor in this regard.
 - (iv) Carrying out the removal/ relocation of utilities, to the specified locations within or outside the Site, including all under and over ground structures, temporary or permanent diversions etc. required as per the clearances of concerned authorities/ utility owners.
 - (v) Providing temporary/ permanent supports and protection as per the methods proposed by the Contractor and agreed by the utility owner and Engineer wherever required for the safety and security of the utility service and public.
 - (vi) The work for relocation /modification of all utilities shall be done as per relevant latest standards and specifications prescribed by the concerned utility owner/ authority. It will be the responsibility of the Contractor to obtain such standards/ specifications from the concerned utility owner/ authority.
 - (vii) Arranging inspection /testing of modified /relocated utilities by the concerned authorities/ utility owners and preparation of test reports and any other reports required under applicable rules, Acts, regulations of such authorities/ utility owners.
 - (viii) Dismantling of old utilities and disposing off the released material as per agreement arrived at with the owners of the utilities.
 - (ix) Handing over of relocated / modified utilities to the owners of utilities/ agencies with 'no objection certification' from them.
- 7.1.8 The Contractor shall consider following stipulations while relocating / modifying electrical utilities.

- 7.1.9 Regulations for power line crossings of Railway tracks as per Indian Railways Manual of AC Traction (Vol.-II, Part-II, and Appendix-IV) read along with Correction Slip no.-18 dated Jan 19, 2009 will be followed by the Contractor.
- 7.1.10 Contractor/ Sub contractor (engaged by the Contractor for electrical works) should have an electrical contractor license as per Indian Electricity Act 2003.
- 7.1.11 No extra payment of any money required to be paid by the Contractor to the utilities owner for supervision charges or on any other account shall be payable by the DFCCIL.
- 7.1.12 Records of the existing utilities encountered shall be kept by the Contractor on the Site and a copy provided to the Engineer. The records shall contain the following details:-
- (i) location of utility;
 - (ii) date on which the utilities were encountered;
 - (iii) date on which the utilities were removed/ relocated;
 - (iv) nature and sizes of the utilities;
 - (v) condition of utility;
 - (vi) temporary or permanent supports provided; and
 - (vii) diversions made –temporary or permanent
 - (viii) details of materials used
 - (ix) relevant photographs/ drawings of various stages
 - (x) clearances of utility owners/ relevant authorities at various stages.
- 7.1.13 The Contractor shall include the details (completed plans showing clearances of relevant authorities and owners, location, ownership, size and material) of all such utilities in the As Built Drawings.
- 7.1.14 The Contractor shall allow, subject to such conditions as the DFCCIL may specify, access to, and use of the Site for laying telephone lines, water pipes, electric cables or other public utilities. For the avoidance of doubt, it is agreed that use of the Site under this Sub-Clause shall not in any manner relieve the Contractor of its obligation to construct the Works in accordance with this Contract and any damage caused by such use shall be restored forthwith at the cost of the Contractor.
- 7.1.15 Relocation/ modification of utilities pertaining to Signalling and Telecommunication will be dealt by the DFCC itself. Similarly Relocation/ modification of utilities pertaining to traction installation and transmission line crossings above 33KV will be dealt by the DFCC itself

7.2 Removal of Trees

- 7.2.1 The felling/re-plantation of trees is governed by the relevant Preservation of trees legislation of the Government of India or the concerned State Government.
- 7.2.2 If for the purposes of the works trees are required to be cut/trimmed/re-planted or removed, the Contractor must notify the Engineer of the tree felling requirements.
- 7.2.3 Such trees shall be limited to those which cause a material adverse effect on the construction of Works.
- 7.2.4 The Contractor shall obtain the applicable permits for felling/re-plantation of such trees from the concerned authorities and the DFCCIL shall assist him in this regard. Payments to the Tree authorities will be made by DFCCIL.
- 7.2.5 Cost for cutting/ replanting/ relocating of trees shall be paid to the Contractor as per relevant item in BOQ.

8 PROTECTION OF THE ADJACENT STRUCTURES AND WORKS

- 8.1 The Contractor shall take all necessary precautions to protect the structures or works being carried out by others adjacent to and, for the time being, within the Site from the effects of vibrations, undermining and any other earth movements or the diversion of water flow arising from its work.
- 8.2 All operations for the execution of the Works shall be carried out so as not to interfere unnecessarily with the convenience of the public or the access to public or private roads or footpaths or properties owned by the Railways/DFCCIL or by any other person.
- 8.3 If during the execution of the Works, the Contractor receives any claim arising out of the execution of the Works in respect of damage to any public or private structure/ Utility etc., he shall immediately report the facts to the Engineer. The Contractor shall negotiate a settlement in respect of such claims and indemnify the Engineer and the DFCCIL in respect of all claims, proceedings, damages, costs, charges and expenses in relation thereto.
- 8.4 The contractor shall be responsible for all risks to the works and for the trespass and shall make good at his own expense all loss or damage whether to the works themselves or to any other property of the Railway/DFCCIL or the lives of persons or property of others from whatsoever cause in connection with the works until they are taken over by the Railways/DFCCIL and this although all reasonable and proper precautions may have been taken by the Contractor, and in case the Railway/DFCCIL/Engineer shall be called upon to make good any costs, loss or damages, or to pay any compensation, including that payable under the provisions of Workmen's compensation act or any statutory amendments thereof to any person or persons sustaining damages as aforesaid, by reason of any act, or any negligence or any omissions on the part of the contractor, the amount of any costs or charges including costs and charges in connection with legal proceedings, which the Railway/DFCCIL/Engineer may incur in reference thereto, shall be charged to the contractor.
- 8.5 The Railway / DFCCIL / Engineer shall have the power and right to pay or to defend or compromise any claim of threatened legal proceedings or in anticipation of legal proceedings being instituted consequent on the action or default of the contractor, to take such steps as may be considered necessary or desirable to ward off or mitigate the effect of such proceedings, charging to Contractor, as aforesaid, any sum or sums of money which may be paid and any expenses whether for reinstatement or otherwise which may be incurred and the propriety of any such payment, defence or compromise, and the incurring of any such expense shall not be called in question by the Contractor.
- 8.6 **Damages to property:** The contractor shall organize all his activities so as not to cause any damage to the property of Railway/DFCCIL or that of other agencies or any third party. In spite of taking all precautions, in the unfortunate event of any damage to the property, then the contractor shall not only indemnify the DFCCIL of the claims made by the affected parties but also settle the matters with the affected parties as per law. If the nature of damage is one of that affecting the train movements or causing a safety hazard to the public, then the situation will be treated as an emergency and the Engineer reserves the right to take all necessary steps as deemed necessary to restore train operations or to remove the hazardous situation or to mitigate the damage, at the risk and cost of the contractor.

9 Insurance:- (CAR policy)

Before commencing of works, it shall be obligatory for the contractor to obtain, at his own cost, insurance cover in the joint name of the contractor and employer from reputed companies under the following requirements:

(a) Insurance against Injury to Persons and Damage to Property

The Contractor, as insuring Party, shall insure against each Party's liability for any loss, damage, death or bodily injury which may occur to any physical property (except things insured under Sub-Clause 9 (b) [Insurance for Works and Contractor's Equipment]) or to any person / animal (except persons insured under Sub-Clause 9 (c) [Insurance for Contractor's Personnel]), which may arise out of the Contractor's performance of the Contract and occurring before the issue of the Performance Certificate.

This insurance shall be for a limit per occurrence of not less than the Rs. 100 Lakh (Rs Hundred Lakh), with no limit on the number of occurrences.

The insurances specified in this Sub-Clause:

- a. shall be effected and maintained by the Contractor as insuring Party,
- b. shall be in the joint names of the Contractor and Employer,
- c. shall be extended to cover liability for all loss and damage to the Employer's property (except things insured under Sub-Clause 9 (b)) arising out of the Contractor's performance of the Contract

The insurance policy shall include a cross liability clause such that the insurance shall apply to the Employer, the Contractor and Subcontractors (wherever applicable) as separately insured.

The Employer shall not be liable for or in respect of any damages or compensation payable to any workman or other person in the employment of the Contractor or any Sub-Contractor (whether applicable), other than death or injury resulting from any act or default of the Employer, his agents or employees. The Contractor shall indemnify and keep indemnified the Employer against all such damages and compensation, other than those for which the Employer is liable as aforesaid, and against all claims, proceedings, damages, costs, charges and against all claims, proceedings, damages, costs, charges, and expenses whatsoever in respect thereof or in relation thereto.

(b) Insurance for Works and Contractor's Equipment

The Contractor, as insuring Party, shall insure the Works, Plant, Materials and Contractor's Documents for not less than the full reinstatement cost including the costs of demolition, removal of debris and professional fees and profit. This insurance shall be effective from the Date of Commencement, until the date of issue of the Taking-Over Certificate for the Works.

The Contractor shall maintain this insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Taking-Over Certificate, and for loss or damage caused by the Contractor in the course of any other operations.

The Contractor shall insure the Contractor's Equipment for not less than the full replacement value, including delivery to Site plus 15% of replacement cost. For each item of Contractor's Equipment, the insurance shall be effective while it is being transported to the Site and until it is no longer required as Contractor's Equipment.

The insurances specified in this Sub-Clause:

- (a) shall be effected and maintained by the Contractor as insuring Party,
- (b) shall be in the joint names of the Parties, who shall be jointly entitled to receive payments from the insurers, payments being held or allocated between the Parties for the sole purpose of rectifying the loss or damage,
- (c) shall cover all loss and damage from any cause not listed as Employer's Risks,

- (d) shall also cover loss or damage to a part of the Works which is attributable to the use or occupation by the Employer of another part of the Works, and loss or damage from the Employer's Risks, excluding (in each case) risks which are not insurable at commercially reasonable terms
- (e) may however exclude loss of, damage to, and reinstatement of:
- (i) a part of the Works which is in a defective condition due to a defect in its design, Materials or workmanship (but cover shall include any other parts which are lost or damaged as a direct result of this defective condition and not as described in sub-paragraph (ii) below),
 - (ii) a part of the Works which is lost or damaged in order to reinstate any other part of the Works if this other part is in a defective condition due to a defect in its design, Materials or workmanship.
 - (iii) a part of the Works which has been taken over by the Employer, except to the extent that the Contractor is liable for the loss or damage, and

(c) Insurance for Contractor's Personnel

The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel.

The Employer and the Engineer shall also be indemnified under the policy of insurance, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.

The insurance shall be maintained in full force and effect during the whole time that these personnel are assisting in the execution of the Works. For a Subcontractor's employees, the insurance may be effected by the Subcontractor, but the Contractor shall be responsible for compliance with this Clause.

(d) Automobile Liability Insurance

The contractor shall effect and maintain an insurance covering use of all vehicle used by the contractor or its sub-contractors (whether or not owned by them) in connection with the design, construction, testing and commissioning of the facilities under the contract in accordance with statutory requirements.

(e) Professional Indemnity Insurance

The Contractor shall provide evidence of professional indemnity insurance carried by its Designer for the Works. The professional indemnity insurance shall cover the risk of professional negligence in the design of the Works. This insurance shall be for a limit of not less than Rs. 50 Lakh and shall be maintained in full force and effect from the Commencement Date of the Works until 03 years after the date of completion of the Defect Notification period.

The Engineer will not issue any payment certificate until the Contractor has provided evidence of this insurance and its period of effectiveness.

The contractor shall provide evidence to the Employer / Engineer before commencement of work at site that the insurances required under the contract have been effected and shall within 60 days of the commencement date, provide the insurance policies to the Employer/Engineer, the contractor shall, whenever, called upon, produce to the engineer or his representative the evidence of payment of premiums paid by him to ensure that the policies indeed continue to be in force.

The Contractor shall also obtain any additional insurance cover as per the requirements of the Contract or Law of the Country.

The Employer/Engineer shall not be liable for or in respect of any damages or compensation payable to any workman or other person in the employment of the Contractor or his sub- contractor or petty contractor / other contractor working there. The Contractor shall indemnify and keep indemnified the employer / Engineer against all such damages and compensation for which the contractor is liable.

The Policies of the contractor shall remain in force throughout the period of execution of the works and till the expiry of the defect liability period except for any specific insurance covers necessary for shorter period.

If the Contractor fails to effect or keep in force or provide adequate cover as acceptable to the engineer in the insurance policies mentioned above, then in such cases, the engineer may effect and keep in force any such insurance or further insurance on behalf of the Contractor. The recovery shall be made at the rate of 1.5 times the premium/premiums paid by the engineer in this regard from the payment due to the Contractor or from the contractor's Performance security. However, the Contractor shall not be absolved from his responsibility and /or liability in this regard.

10 MONTHLY PROGRESS REPORTS

10.1 GENERAL

- 10.1.1 The Contractor shall prepare Monthly Progress Reports covering all aspects of the execution of the works. Such Monthly Progress Report shall be in writing and shall be delivered to the Engineer by the 5th day of the month following the month of the Monthly Progress Report. The monthly Progress Report shall take account of work performed up to and including the last day of the month to which the Monthly Progress Report relates.
- 10.1.2 The Monthly Progress Report shall include an executive summary and contain clear and concise statements in respect of every significant aspect of the works, progress, photographs, CD of important activities etc.
- 10.1.3 The reports, documents and data provided shall be an accurate representation of the current status of the works and of the works to be accomplished and shall provide the Engineer with a sound basis for identifying problems and deviations from planned works and for making decisions.
- 10.1.4 It shall be submitted in a format agreed to by the Engineer in charge.
- 10.1.5 The results of quality audits shall be summarized in the Contractor's monthly reports.

10.2 PHYSICAL PROGRESS

- 10.2.1 It shall describe the status of work performed in descriptive form, significant accomplishments, including critical items and problem areas including current and anticipated delaying factors and their impact, corrective actions taken or planned and other pertinent activities, and shall, in particular, address interface issues with all agencies involved, problems and resolutions during the period or anticipated.
- 10.2.2 It shall include a simplified representation of progress measured in percentage terms compared with percentage planned as derived from the Works Programme.

11 QUALITY CONTROL**11.1 GENERAL**

- 11.1.1 The Contractor shall be responsible for quality control including all testing, checking and measurement.
- 11.1.2 The DFCCIL or the Engineer may carryout independent quality control tests through his own personnel or other agencies.
- 11.1.3 The Contractor shall provide all necessary assistance and cooperation to the DFCCIL and the Engineer in obtaining samples for laboratory tests or carrying out field tests.

11.2 FIELD GEOTECHNICAL ENGINEERING LABORATORY

- 11.2.1 The Contractor shall establish and operate or hire approved field geotechnical laboratories adequately equipped to carry out all required in-situ and laboratory tests to assess the nature and properties of the sub-soils, monitor and control the properties of the blanket and borrow materials and finished earthworks which are of significance to design, construction and performance of the formation and earthworks.
- 11.2.2 The number and location of the laboratories shall be finalized in consultation with the Engineer on the basis of the volume of earthworks, schedule of completion, frequency of testing etc.
- 11.2.3 The laboratories shall have all the required facilities, equipment and competent staff for carrying out all the tests which are required for purpose of quality control.
- 11.2.4 The number of sets of equipment for each test and the number of staff deployed shall be adequate to ensure the specified frequency of testing without adversely impacting the time schedule of construction.
- 11.2.5 All equipment and accessories shall conform to the appropriate Indian or approved international standard, from a reputed manufacturer and shall be in good working condition.
- 11.2.6 Wherever applicable, the equipment's or parts shall be calibrated in accordance with established standards and practices.
- 11.2.7 Each laboratory shall be furnished with an original set of the latest version of all relevant standards for all the required test methods.
- 11.2.8 Contractor shall systematically maintain records of all tests in a format approved by the Engineer.
- 11.2.9 The Contractor shall ensure unhindered access at all times to DFCCIL, Engineer or their representatives to inspect the laboratory, equipments and samples, to witness the tests and to verify the records.
- 11.2.10 DFCCIL and the Engineer shall have the right to use the field laboratory to make independent assessments of the accuracy and repeatability of the tests and verification of the results by their personnel or representatives from time to time.

12 TESTING**12.1 GENERAL**

- 12.1.1 The Contractor shall provide and perform all forms of testing procedures applicable to the Works and various components including all necessary factory, site and acceptance tests required therein. Until the time the Works are taken over by the DFCCIL, Contractor shall maintain the same in a manner so as to continuously meet the acceptance criteria for all aspects, as per the requirements mentioned in the

technical specification. Contractor shall make a consolidated list of all the tests required for Testing along with the testing procedures and applicable codes/ manuals and submit the same to the Engineer for enabling a joint program of testing.

- 12.1.2 All testing procedures shall be submitted at least twenty-eight (28) days prior to conducting any test. The testing procedures shall show unambiguously the extent of testing covered by each submission, the method of testing, the acceptance criteria, the relevant drawing (or modification) status and the location.
- 12.1.3 The testing procedures shall be submitted, as required, by the Contractor during the duration of the contract to reflect changes in design of civil works, interface systems or the identification of additional testing requirements.
- 12.1.4 The Engineer, the DFCCIL's Personnel and authorized agencies shall at all reasonable times:
- 12.1.5 Have full access to all parts of the Site and to all places from which natural Materials are being obtained, and
- 12.1.6 During production, manufacture, and construction (at the Site and elsewhere), be entitled to examine, inspect, measure and test the materials and workmanship, and to check the progress of manufacture of Plant and production and manufacture of Materials.
- 12.1.7 The Contractor shall give them full opportunity to carry out these activities, including providing access, facilities, permissions, and safety equipment. No such activity shall relieve the Contractor from any obligation or responsibility. They shall be provided the facilities for monitoring all tests and have access to all testing records.
- 12.1.8 Ample time shall be allowed within the testing programmes for necessary alterations to equipment, systems and designs to be undertaken, engagement of Engineer, together with re-testing .
- 12.1.9 All costs associated with the testing as above shall be borne by the Contractor, unless otherwise specified, including the services of any specialised personnel or independent assessors concerned to the work done by him. The Contractor shall also bear any expenses incurred due to resetting caused by defects or failure of equipment to meet the requirements of the Contract in the first instance for the works done by him.
- 12.1.10 Unless agreed in writing by the Engineer, the personnel engaged on testing shall be independent of those directly engaged in the execution or installation of the same equipment.
- 12.1.11 All testing equipment shall carry an appropriate and valid calibration label.
- 12.1.12 Examination of Works before covering up: No work or part of work shall be covered up or put out of view, without the prior approval of the Engineer or the Engineer's Representative. The Contractor shall uncover any part or parts of the Works, or make openings in or through the same, as the Engineer may from time to time direct, and shall reinstate and make good such part or parts, to the satisfaction of the Engineer.
- 12.1.13 If any defect or damage is one requiring immediate attention from a safety, environment or operational aspect, the Engineer has the authority to proceed with the rectification in any manner suitable and deduct the cost from the next due interim payment.

12.2 RECORDS OF TESTS

- 12.2.1 Records of in-situ tests and laboratory compliance tests carried out by the Contractor shall be kept by the Contractor on the Site and a report shall be submitted to the Engineer within seven (7) days, or such other time stated in the Contract or in the Quality Assurance Programme, after completion of each test.
- 12.2.2 In addition to any other requirements, the report shall contain the following details:
- (i) material or part of the Works tested;
 - (ii) location of the batch from which the samples were taken or location of the part of the Works;
 - (iii) place of testing;
 - (iv) date and time of tests;
 - (v) weather conditions in the case of in-situ tests;

- (vi) technical personnel supervising or carrying out the tests;
 - (vii) size and description of samples and specimens;
 - (viii) method of sampling;
 - (ix) properties measurements taken during the tests;
 - (x) test results, including any calculations and graphs;
 - (xi) specified acceptance criteria; and
 - (xii) other details stated in the Contract.
- 12.2.3 Reports of tests shall be signed by the Contractors Site Representative or his assistant, or by another representative authorised by the Contractor.

13 SUPERVISION

- 13.1 The contractor shall deploy technical qualified person as per approved Quality Assurance Plan (QAP) for following activities, as applicable during execution of works
- 1.1. Exaction of entire work proposed to be executed in this contract and as detailed in Scope of work.
 - 1.2. Placing and stressing of pre-stressing wire;
 - 1.3. Batching, Mixing, Placement & Compaction of concrete.
 - 1.4. De-moulding of Concrete & PSC Elements, Water Curing, etc.
 - 1.5. Testing of Cement, Cement Mortar Cubes, Concrete Cubes, PSC Panel & Column etc.
 - 1.6. Testing of Structural Steel Components as per provision of Codes
 - 1.7. Quality control during Fabrication of Structural steel an erection.
 - 1.8. Calibration of testing and measuring equipment and different gauges;
- 13.2 Technical supervisors of proven experience in execution shall be engaged by the contractor on the work. The contractor shall state the name of the technical personnel along with his technical qualification in QAP.
- 13.3 Normally no change in the technical personnel during the period of construction would be acceptable to the DFCCIL except under very special circumstances. The Engineer-in-charge will approve any proposed replacement of key personnel only if their qualification, abilities and relevant experience are substantially equal to or better than those of the personnel listed in QAP.
- 13.4 If the Contractor intends to replace a key personal, the Contractor shall, not less than 30 days before the intended date of replacement, give notice to the Engineer-in-charge, the name, address, academic qualification and relevant experience of the intended replacement key personnel. The Contractor shall not without the prior consent of Engineer-in-charge, revoke appointment of the key personnel or appoint a replacement.
- 13.5 If there is any such default in deployment of any key personnel, in addition to contractual action for such default a penalty as indicated in subsequent Para shall be recovered from the Contractor.
- 13.6 The DFCCIL reserves the right to stop the work in case the technical supervisor as listed in QAP is not available during execution of work.
- 13.7 If the Engineer-in-charge asks the Contractor to remove a person who is a member of the Contactor's staff or his workforce stating the reason, the Contractor shall ensure that the person leaves the site within 7 days and has no further connection with the work in the contract.

13.8 If the work checked by Contractor's technical personnel get rejected or if any contractor's Engineer/Supervisor/Artisan is found lacking in quality of work more than twice, the concerned personnel will have to be replaced by suitable well trained personnel

14 DEPLOYMENT OF QUALIFIED ENGINEERS AT WORK SITES BY THE CONTRACTOR (As per Clause No.26-A of G.C.C.)

14.1 The contractor shall also employ Qualified Graduate Engineer or Qualified Diploma Holder Engineer, based on value of contract, as may be prescribed by the Ministry of Railways through separate instructions from time to time.

14.2 In case the contractor fails to employ the Engineer, as aforesaid, he shall be liable to pay liquidated damages at the rates, as prescribed in the tender document penalty at the rates, as may be prescribed by the Ministry of Railways through separate instructions from time to time for the default period for the provisions, as contained in Para 23.

No. of qualified Engineers required to be deployed by the Contractor for various activities contained in this works contract shall be as under:-

S. No	Position	Minimum No. of Personnel	Qualification	Experience In Similar Work [years]
1	Project Managers –	1	Graduate in Civil Engineering	10 years, out of which 6 years in-charge of road/Railway project.
2	Sr. Engineers for Bridges-RCC work	1	Graduate/ Diploma in Civil Engg.	5 Years (for Graduate) 10 years for Diploma
3	Supervisors Bridges	2	Minimum Diploma in Civil Engineering	5 years
4	Draftsman with knowledge of AutoCAD(a) Civil Engineering	1	Diploma in Civil Engineering	3 years

Note:

- The suitability of the Qualified Engineer will be assessed by Engineer In charge. Only after the approval of Engineer Incharge the contractor shall employ the qualified Engineer.
- ***Project Manager is to be deployed within 30 days of issue of Letter of Acceptance. The programme for deployment of other personnel shall be conveyed by PMC/DFCCIL and personnel shall be deployed within 30 days of the stated requirement. In case of failure to deploy any personnel within 30 days of the stated requirement, a penalty shall be imposed for each day of delay as under:***

- i. *Rs 2000 per person per day for Project Manager & Safety Officer.*
 - ii. *Rs 1000 per person per day for Sr.Engineers; Quality Assurance Specialist/Quality Officer*
 - iii. *Rs 500 per person per day for other personnel.*
- *On completion/likely completion of activities concerned to particular personnel, demobilization of that personnel shall be requested by the Contractor at least 30 days in advance and demobilization shall be done with the approval of PMC/DFCCIL only. In case demobilization is done without approval of PMC/DFCCIL, the penalty mentioned in note (1) above, as relevant, shall be imposed for each day of absence of the personnel.*
 - Normally no change in the technical personnel during the period of construction would be acceptable to the DFCCIL except under very special circumstances. The Engineer-in-charge will approve any proposed replacement of key personnel only if their qualification, abilities and relevant experience are substantially equal to or better than those of the personnel listed above.

15 INSTRUCTIONS/DIRECTIVES OF THE ENGINEER'S REPRESENTATIVE

- 15.1 The contractor shall at all times, execute the contract work only in the presence and under the supervision of the Engineer's Representative or a DFCCIL employee specifically appointed on his behalf. No work under the contract shall, therefore, be commenced by the contractor without the express permission of the Engineer's representative.
- 15.2 The contractor shall always execute the work under this contract in strict compliance with the instructions/directives by the Engineer's representative. Any act of non-compliance with the instruction/directives issued by the Engineer's representative shall be considered as a default of the contractor where after the DFCCIL shall be free to take further appropriate action as provided in the contract for dealing with such defaults of the contractors. The decision of the Engineer-in-charge whether there has been an act of noncompliance with the instruction/directives of the Engineer's representative for the purpose of this clause shall be final and conclusive.
- 15.3 The instructions/directives by the Engineer's representative shall not, however, absolve the contractor of his responsibility or reduce his responsibility in any manner whatsoever in regards to maintaining at all times the safe working conditions at the work site.
- 15.4 Any instructions or approval given by the Engineer's representative to Contractor in connection with the works shall bind the Contractor as though it had been given by the Engineer provided always as follows:
- i. Failure of the Engineer's representative to disapprove any work or materials shall not prejudice the power of the Engineer thereafter to disapprove such work or material and to order the removal or breaking up thereof.
 - ii. If the Contractor shall be dissatisfied by reason of any decision of the Engineer's representative, he shall be entitled to refer the matter to the Engineer who shall there upon confirm or vary such decision. As per Clause No. 21.0 of General Conditions of Contract.

16 NON-COMPLIANCE WITH THE INSTRUCTIONS/DIRECTIVES OF THE ENGINEER'S REPRESENTATIVE

- 16.1 The contractor shall always comply with the instructions/directives issued by the Engineer's representative from the time to time. In the event of any non-compliance with such instructions/directives, apart from and in addition to other remedies available to the DFCCIL as specified herein above the Engineer's representative may employ at the works Railway's workmen with necessary equipment as considered appropriate and adequate by him to provide the requisite conditions for the safe and unhampered movement of Railway traffic. The decision of the Engineer's representatives in regard to the

need of appropriateness and adequacy of the deployment of the Railway Workmen with necessary equipment shall be final and conclusive.

- 16.2 When the Railway workmen with necessary equipment are deployed in the above manner, recovery at the following rate shall be made from the contractor's dues under this contract or any other money of the contractor available with the DFCCIL under this contract. The recovery for the total Railway Workmen Hours employed at the rate of Rs. 100/- (Rupees Hundred only) per Workmen-Hour irrespective of the type and grade of the Railway Employee actually employed. The aggregate period of the Workman-Hours for the above recoveries shall be reckoned from the time the Railway Workmen are actually deployed at the work site till the work is completed to the satisfaction of the Engineer's Representative whose decision in this regard shall be final and conclusive.
- 16.3 During the above-mentioned period of suspension of work, the contractor shall not in any manner attempt to carry out any work at the work site. Any such attempt of the contractor shall be deemed to be an unauthorized work on the work site. For such acts, the contractor shall then be liable for further appropriate action under the relevant provisions of the Indian Railway Act.
- 17 WARRANTY: The Contractor(s) shall warrant the materials supplied under this contract to be free of any defects in material and workmanship under ordinary use and service.
- 18 HANDING OVER OF SITE FOR WORK: The entire land required for this work is available. However, DFCCIL may not hand over the entire land required for completion of this work for making bank/cutting or excavation to the contractor(s) due to any unavoidable reasons. Land may be handed over in different stretches, which may not be continuous. Contractor(s) will be required to carry out the work in available stretches. If some stretch of land cannot be handed over to the contractor for borrowing earth or making bank/cutting within the contract period then suitable extension will be granted only for the affected portion without any payment of extra claim to the contractor.
- 19 WORKING DURING NIGHT: The Contractor shall not carry out any work between sun-set and sun-rise without the previous permission of the Engineer. However, if the Engineer is satisfied that the work is not likely to be completed in time except by resorting to night work, he may order the same without confirming any right on the Contractor for claiming any extra payment for the same. (Authority Clause No. 23 of GCC,).

20. PROJECT PLANNING, PROGRAMME AND PROGRESS MONITORING

20.1 GENERAL

- 20.1.1 In accordance with the Conditions of Contract Clause 26 the Contractor shall submit his detailed time program to the Engineer within twenty-eight (28) days of the Commencement Date of the Works.
- 20.1.2 In compiling its Works Programme and in all subsequent updating and reporting, the Contractor shall make provision for the time required for co-ordinating and completing the construction, procurement, manufacture, supply, installation, testing, of the Works.
- 20.1.3 This period will include co-ordination with all others whose consent, permissions, authority or licence is required prior to the execution of any work.
- 20.1.4 The Contractor shall, during the progress of the Works, constantly monitor his progress against the programmes described below.
- 20.1.5 The Works Programme, and all more detailed or revised versions, shall be submitted to the Engineer for his consent in accordance with the provisions of the conditions of Contract.

21. RECORDS**21.1 DRAWINGS PRODUCED BY THE CONTRACTOR**

- 21.1.1 Drawings produced by the Contractor including Drawings of Site layouts, Temporary Works, etc. for submission to the Engineer shall generally be to ISO A1 size.
- 21.1.2 They shall display a title block with the information.
- 21.1.3 The number of copies to be submitted to the Engineer shall be as stated in the Contract, or as required by Engineer.
- 21.1.4 The Contractor shall provide five sets of As Built Drawings along with read only electronic version of the same on CD/DVD to the Engineer.

21.2 PROGRESS PHOTOGRAPHS AND VIDEOGRAPHY

- 21.2.1 The Contractor shall provide monthly progress photographs which have been properly recorded to show the progress of the works to the Engineer.
- 21.2.2 The photographs, of not less than 20 in number per month, shall be taken on locations agreed with the Engineer to record the exact progress of the Works. All important events shall be photographed.
- 21.2.3 Two sets of photographs shall be provided on CD ROM format with two sets of colour prints of 175 mm x 125 mm size in albums duly labelled.
- 21.2.4 The Contractor shall mount each set of each month's progress photographs in a separate album of a type to which the Engineer has given his consent, and shall provide for each photograph two typed self-adhesive labels, one of which shall be mounted immediately below the photograph and one on the back of the photograph.
- 21.2.5 Each label shall record the location, a brief description of the progress recorded and the date on which the photograph was taken.
- 21.2.6 All photographs shall be taken by a skilled photographer.
- 21.2.7 Photo processing shall be carried out by a competent processing firm to the satisfaction of the Engineer.
- 21.2.8 The Contractor shall ensure that no photography is permitted on the Site without the consent of the Engineer.
- 21.2.9 Important events, construction activities, working of new machinery, weather effects or any occasion advised by the Engineer shall be video graphed. The recording shall be done or converted to appropriate format and presented in a CD/DVD with appropriate voice recording describing the event.

21.3 RECORDS OF WAGE RATES:

The Contractor shall keep monthly records of the average, high and low wage rates for each trade/tradesman employed on the Site and records shall be made available to the Engineer during inspection.

22. MONTHLY PROGRESS REPORTS**22.1 GENERAL**

- 22.1.1 The Contractor shall prepare Monthly Progress Reports covering all aspects of the execution of the works. Such Monthly Progress Report shall be in writing and shall be delivered to the Engineer by the 5th day of the month following the month of the Monthly Progress Report. The monthly Progress Report shall take

account of work performed up to and including the last day of the month to which the Monthly Progress Report relates.

- 22.1.2 The Monthly Progress Report shall include an executive summary and contain clear and concise statements in respect of every significant aspect of the works, progress, photographs, CD of important activities etc.
- 22.1.3 The reports, documents and data provided shall be an accurate representation of the current status of the works and of the works to be accomplished and shall provide the Engineer with a sound basis for identifying problems and deviations from planned works and for making decisions.
- 22.1.4 It shall be submitted in a format agreed to by the Engineer and shall contain all sections/sub-sections .
- 22.1.5 The results of quality audits shall be summarised in the Contractor's monthly reports.

22.2 SAFETY

22.3 Accident:-

- (a) The contractor shall, in respect of all staff engaged by him or by his sub-contractor, indemnify and keep the employer at all times indemnified and protected against all claims made and liabilities incurred under Workman's Compensation Act, the Factories Act and the Payment of Wages Act, and rules made there under from time to time or under any other labour and Industrial Legislation made from time to time.
- (b) The contractor shall indemnify and keep the employer indemnified and harmless against all actions, suits, claim demands, costs, charges or expenses arising in connection with any death or injury sustained by any person or persons sustained due to the acts or omission of the contractor, his sub-contractors, his agents or his staff during the executions of this contract irrespective of whether such liability arises under the Workman's Compensation Act, or Fatal Accident Act or any other statute in force for the time being.
- (c) The contractor's liability to meet third party claims of the type outlined above will be applicable only in cases where accidents have been caused by workmanship, material, execution or negligence on the part of the contractor and further the liability of the contractor will be limited to Rs.50 lakh for any one accident without any limit on the number of accidents.
- (d) The contractor shall be responsible for all repairs and rectification of damages to completed works or works under execution due to DFCCIL accidents, thefts, pilferage or any other cause, without delay to minimize or to avoid traffic detentions, in a section until the installation are provisionally handed over to the employer.

22.4 Safety Measures:-

- (a) The contractor shall take all precautionary measures in order to ensure the protection of his own personnel moving about or working on the Railway /DFCCIL premises, but shall then conform to the rules and regulations of the Railway /DFCCIL if and when, in the course of the work there is likely to be any danger to persons in the employment of the contractor due to running traffic while working in the Railway /DFCCIL siding and premises, the contractor shall provide flagman or look out men for protection of such persons. The employer shall remain indemnified by the contractor in the event of any accident occurring in the normal course of work, arising out of the failure of contractor or his men to exercise reasonable precaution at all places of work.
- (b) Blasting of rocks for foundation work shall be done only after due notice is given to the employer and time/s and date /s for blasting operations agreed to by the employer. Blasting, if required to be done in the vicinity of the track, shall not be undertaken until the Employer's flagmen on duty take necessary step to protect trains and the track is adequately protected by the contractor against damage by blasted rock .The contractor shall follow detailed instructions which will be issued to him regarding blasting operations in the vicinity of tracks

- (c) The contractor shall abide by all DFCCIL regulations in force for the time being and ensure that the same are followed by his representatives, Agents or sub -contractors or workmen. He shall give due notice to his employees and workers about provision of this para.
- (d) The works must be carried out most carefully without any infringement of the Indian Railway Act or the General and Subsidiary Rules in force on the Railway /DFCCIL, in such a way that they do not hinder Railway / DFCCIL train operation or affect the proper functioning of or damage any DFCCIL equipment, structure or rolling stock except as agreed to by the employer, provided that all damage and disfiguration caused by the contractor at his own cost failing which cost of such repairs shall be recovered from the contractor.
- (e) If safety of track or track drainage etc. is affected as a consequence of works undertaken by the contractor, the contractor shall take immediate steps to restore normal conditions. In case of delay, the employer shall, after giving due notice to the contractor in writing, take necessary steps and recover the costs from the contractor.

22.4.1 A review of all safety aspects during the month including reports on all accidents and actions proposed to prevent further occurrence including details of safety training and drive conducted during the period and proposed in coming months. This shall be the first item of Monthly Progress Report.

22.5 FINANCIAL STATUS

- 22.5.1 A narrative review of all significant financial matters, and actions proposed or taken in respect to any outstanding matters.
- 22.5.2 A spread sheet indicating the status of all payments due and made including recoveries if any.
- 22.5.3 A report of the status of any outstanding claims even if these is NIL.
- 22.5.4 The report shall in particular provide interim updated accounts of continuing claims.

23. RAILWAY TRAFFICE BLOCK (POSSESSION) MANAGEMENT

23.1 GENERAL

- 23.1.1 The works like of construction of Subway, Platform wall adjoining running Railway Track, Any Excavation adjoining Railway track, Erection of FOB girder or PEB across Railway track etc. will be executed under Railway traffic blocks.
- 23.1.2 The Contractor shall comply with the traffic block (Possession) management system operated by Indian Railways (IR).
- 23.1.3 The Contractor shall appoint a responsible person who shall coordinate with IR and with the other adjacent civil, structures and track works contractors and the systems contractor as applicable and who will act as the traffic block coordinator for the Contractor only.
- 23.1.4 The person appointed must have experience of IR operations and must be fully aware of IR rules and regulations related to possession of track for construction of railway works and in accordance with IR regulations to issue possession requests.
- 23.1.5 For the purpose he shall be duly certified in accordance with the said rules.

23.2 POSSESSION PERIODS

- 23.2.1 The Contractor may use possessions on the line for execution of works as per approved plan following strict safety procedures.
- 23.2.2 Line closures may be agreed subject to IR approval.
- 23.2.3 The DFCCIL gives no warranty that line closures and possession periods will be available during the period of the Works.
- 23.2.4 The DFCCIL will however provide any assistance necessary to the Contractor to enable him to obtain the line closures and possessions required by him for the Works but will not be responsible if any Possession requests are refused by IR.
- 23.2.5 The Contractor shall prepare technological and organizational schedule for construction which shall include the work times in the weekends and during the dark part of the day.
- 23.2.6 The Contractor shall submit his requests for 'possessions' at least fourteen (14) days earlier and inform IR at least 48 hours earlier if he is not able to use the permitted 'possessions'.

24. SITE ESTABLISHMENT

24.1 GENERAL

The Contractor shall provide for the use of the DFCCIL / Engineer office accommodation, equipment, communication & drawing facilities throughout the course of the work and for such period of time during the defects liability period as the DFCCIL & Engineer may require, The details of the accommodation & the other facilities are detailed below: All the facilities under this clause will continue to be maintained by the Contractor free of cost till the defect liability period is over. Thereafter the Contractor shall dismantle the building and take away all the materials, office furniture, & equipment etc which will be the property of the Contractor. The provisions of the site facilities will be paid for separately.

24.2 ENGINEER'S ACCOMMODATION: Site Office Requirements

The Contractor shall design, construct, equip or provide and furnish the site offices for the DFCCIL's and Engineer's use within **90 days** after the commencement date. The Contractor shall also maintain the site offices in good conditions and provide services including, but not limited to maintenance of the office equipment and furniture, repairing and mending, cleaning, consumable replenishment in respect of toiletries, cartridges for the plotter and colour laser writers, first aid box, batteries/ battery cells, drinking water etc. Design of all the Site Offices shall be submitted to the Engineer for review prior to commencement of the construction of those facilities. Details of the Engineer's site office including provisional site offices are described in the following paragraphs.

All furniture, furnishings, fittings & fixture and equipment etc. shall be of the configuration, make and quality as consented by the Engineer.

Contractor can also provide the site office by hiring a existing building subjected to the requirement of the area specified in 24.3 below with the approval of Engineer.

24.3 Engineer's Site Offices

- 24.3.1 The area surrounding the office shall be well drained and provided with concreted pavements, walkways and parking areas for the vehicles.
- 24.3.2 The main office building shall be of sound design and of the material as approved by the Engineer, complying with national building codes. The office shall be weather proof, lined inside with plywood, and painted internally and externally. Floors shall be tiled and floor to ceiling height shall be as approved by the Engineer. Each room having an internal wall shall have at least one screened window. The office building shall have two external lockable doors with screened storm doors. Electricity supply and receptacles shall be provided in various locations appropriate to the usage of the rooms. Rooms shall be well lighted, appropriate HVAC systems with temperature control and other necessary building services as described in the National Building Code of India.
- 24.3.3 Plumbing fixtures shall be standard types made out of porcelain or stainless steel and all pipework and fittings shall be polyvinyl chloride (PVC). All works, materials and fixtures shall comply with the national plumbing code, sanitary engineering standards, and other applicable regulations.
- 24.3.4 The equipment and furniture to be provided are listed in Table at the end of this Appendix. The equipment and furniture shall be of suitable make/Brand, model, type, size and capacity.

24.4 OFFICE MAINTENANCE

The contractor is required to maintain the offices throughout the contract period and provide the following, but not limited to:

- 24.4.1 Pay all electricity charges.
- 24.4.2 Reimburse telephone bills for the use of telephone, upto Rs 3000/- per month for each external landline connection
- 24.4.3 Pay all water charges.
- 24.4.4 Carry out necessary repairs to office and equipment as and when required.
- 24.4.5 Day - to - Day cleaning and maintenance and watch & ward etc
- 24.5 The contractor shall provide within Two months from the Date of Commencement following personnel in the office as required for watch and ward of the site office.
- 24.6 Watchmen / Security (3 shifts of 2 men in a shift, till the defect Liability period is over)

Note: In case of delay beyond Two-month, penalty @ Rs 5000/- Per week or part thereof will be imposed.

24.7 EQUIPMENT FOR USE OF THE ENGINEER.

The Contractor shall provide at his own cost new equipment and software as listed below and maintain them for the exclusive use of the DFCCIL and the Engineer. The Contractor shall provide and maintain the following equipment for the use of the Engineer and the DFCCIL within one month from the date of commencement of the works until the defect liability period is over. The equipment shall be property of the contractor on completion of defect liability period.

- 24.7.1 Computers- two nos. – All in One.

- 24.7.2 Windows 10 professional, Licensed O.S. with minimum specification of Intel Pentium i5, 2.8 GHZ 3MB L2 cache, 4 GB DDR 3 RAM, 500 GB Hard Drive Disk, DVD Writer, 15" colour TFT monitor, 10/100 LAN Card, Modem Card.
- 24.7.3 Printers – 2 nos. (A4 size – 1 No. and A3 size – 1 No.)The A4 size printer shall be all in one officejet, having features of Fax, Scanner and Printer, A3 size printer shall be Colour Officejet with a print speed of up to 8 pages at 800 dpi or More.
- 24.7.4 Application software
- (i) Microsoft office latest release(2013).
 - (ii) AUTOCAD 3D 2015
 - (iii) M S Project/ Sure Track.
 - (iv) PDF Converter/Professional
- 24.7.5 Colour scanner- 1 no. A3 size.
- 24.7.6 Xerox Machine- 1 No. for paper prints capable of reduction and copying A3 & A4 size paper with automatic document feeder capability and sorter.(Canon IR 2020)
- 24.7.7 UPS system with sufficient power backup (with minimum backup time of 30 minute) to meet the sufficient power load in case of power disruption.
- 24.7.8 Surge Protection Devices (one for each computer and printer as given above)
- 24.7.9 Power supply for the systems is to be AC 240 volts, 50 Hz from normal building wiring circuit mains, power regulator, stabilizer or transformer should be supplied by the Contractor for the computer systems such that the systems can function efficiently.
- Note: In case of failure to provide the equipments within one month, penalty @ Rs 5000/- Per week or part thereof will be imposed.

25. Deleted

26. Rail traffic management

Ensure safety of rail commuters near stacking yard and construction and fabrication sites Ensure safety while transferring construction material at construction site within rail premises. Obtain permission from DRM. Railway Manager)for power and/or operation blocks. As far as possible the blocks will be during non-traffic hours- 2-5 am.

26.1 Interface with Indian Railway Operations

- 26.1.1 The Contractor will review the interfaces with Indian Railway's operations and prepare a specific safety plan for all works that may affect the operating railway.
- 26.1.2 The Contractor will comply with and incorporate Indian Railway's rules and regulations for track, signalling and operations possessions into his safety plan and will operate a permit to work system for all works which may affect the operations of the existing railway.
- 26.1.3 Similarly, the site safety plan shall consider with other interfacing contractors in the closed vicinity of the Railways.

- 26.2** Compliance to road safety rules: The driver should be trained in traffic rules, safer/ defensive driving practice, road courtesies etc. Road transportation vehicles should not be loaded with bulk materials beyond the safe clearance Vehicles will have speed restrictions
- 26.3** Train / Worker Accidents : Railway workers in the vicinity of rail lines are exposed to moving trains. Recommended management strategies include:
- I. Training workers in personal track safety procedures;
 - II. Blocking train traffic on lines where maintenance is occurring (“green zone working”) or, if blocking the line is not feasible, use of an automatic warning system or, as a last resort, human lookouts;
- 27. Guarantee / Defect Liability Period:-**
- (a) The Contractor shall guarantee that all the works executed under this contract shall be free from all defects and faults in material, workmanship and manufacture and shall be of acceptable standards for the contracted work and in full conformity with the technical specifications, drawings and other contract stipulations, for a period of 06 months from the date of taking over by the Employer
 - (b) During the period of guarantee the Contractor shall keep available an experienced engineer/manpower to attend to any defective works / installations resulting from defective erection and/or defect in the installation supplied by the Contractor. This engineer shall not attend to rectification of defects which arise out of normal wear and tear and come within the purview of routine maintenance work. The contractor shall bear the cost of modifications, additions or substitutions that may be considered necessary due to faulty materials or workmanship for the satisfactory working of the equipment. The final decision shall rest with the Engineer his successor(s)/Nominee.
 - (c) During the period of Guarantee the Contractor shall be liable for the replacement at site of any parts which may be found defective in the executed work whether such parts / structural elements of his own manufacture or those of his sub-contractor / supplier whether arising from faulty materials, workmanship or negligence in any manner on the part of the Contractor provided always that such defective parts as are not repairable at site are promptly returned to the Contractor if so required by him at his (Contractor’s) own expenses. In case of parts of executed work detected during guarantee period, contractor should replace all such items irrespective of the fact whether all such items have failed or not. The Contractor shall bear the cost of repairs carried out on his behalf by the Employer at site. In such a case, the contractor shall be informed in advance of the works proposed to be carried out by the Employer.
 - (d) If it becomes necessary for the Contractor to replace or renew any defective portion of the structural elements until the expiration of six month from the date of such replacement or renewal or until the end of the above mentioned period whichever is later.

Such extension shall not apply in case of defects of a minor nature, the decision of the General Manager / CPM or his successor/nominee being final in the matter. If any defect be not remedied within a reasonable time during the aforesaid period the Employer may proceed to do work at the Contractor’s risk and expense, but without prejudice to any other rights and remedies which the Employer may have against the Contractor in respect of such defects or faults.
 - (e) The repaired or renewal parts structure shall be delivered / supplied and erected / executed on site free of charge to the employer.

- (f) Any materials, fittings, components or equipment's / structure supplied under items for supplying / providing and fixing in schedule shall also be covered by the provisions of this paragraph. The liability of the Contractor under the guarantee will be limited to re-supply of components / structure installation and fittings.

28. Final Acceptance:

- (a) The final acceptance of the entire work executed shall take effect from the date of expiry of the period of guarantee / Defect Liability Period as defined in paragraph 1.5.15 above of the expiry of the last of the respective periods of guarantee of various items (viz. RFO, Bridge, Earthwork etc), provided in any case that the Contractor has complied fully with his obligations under clause 1.5.15 in respect of each item, provided also that the attention has been paid by way of maintenance by the Employer.
- (b) If on the other hand the contractor has not so complied with his obligation under Para 1.5.15 above in respect of any work, the Employer may either extend the period of guarantee in respect of that work until the necessary works are carried out by the Contractor or carry out those works or got them carried out suo-moto on behalf of the Contractor at the Contractor's expenses. After expiry of the period of guarantee for each work, a certificate of final acceptance for the section shall be issued by the Employer and the last of such certificate will be called the last and final acceptance certificate. The contract shall not be considered as completed until the issue of final acceptance certificate by the Employer.
- (c) The Employer shall not be liable to the Contractor for any matter arising out of or in connection with the contract or execution of the work unless the Contractor shall have made a claim in writing in respect thereof before the issue of final acceptance certificate under this clause.

Notwithstanding the issue of final acceptance certificate the Contractor and the Employer (subject to sub-clause as above) shall remain liable for fulfilment of any obligation incurred under the provision of the contract prior to the issue of final acceptance certificate which remains unperformed at the time such certificate is issued and for determining the nature and extent of such obligation the contract shall be deemed to remain in force between the parties hereto.

29. Payment

Payment will be governed by the terms specified in Part-I, Chapter IV /Chapter- V (GCC/SCC) and in accordance with accepted schedule of prices, read with relevant para of the other parts and Chapters of the Tender Document. The employer retains the right to withhold money due to the contractor arising out of this contract for any default of the contractor.

- (i) The Contractor shall, whenever required, produce or cause to be produced for examination by the Employer any quotation / invoice, cost of other account, book of account, voucher, receipt letter, memorandum paper or writing or any copy of or extract from any such document and also furnish information and returns verified in such manner as may be required in anyway relating to the execution of this contract or relevant for verifying or ascertaining the cost of the execution of this Contract (the decision of the employer on the question of relevancy of any documents, information or return being final and binding on the parties). The Contractor shall similarly produce vouchers etc., if required, to prove to the Employer that materials supplied by him are in accordance with the specifications laid down in the contract.
- (ii) If any portion of the work be carried out by a sub-contractor or any subsidiary or allied firm or company the Employer shall have power to secure the books of such sub-contractor or any subsidiary or allied firm or company, through the Contractor, and such books shall be open to his inspection. The Contractor should seek prior permission from the employer for subletting whole and/or part of the work to any sub-contractor.

- (iii) The obligations imposed by sub-clause (i) and (ii) above are without prejudice to the obligation of the Contractor under any statute, rules or order binding to the Contractor or other conditions of the contract.
- (iv) It is an agreed term of the contract that the employer reserves the right to carry out post- payment Audit and/or technical examination of the works and the final bill, including all supporting vouchers, abstracts etc. and to make a claim on the Contractor for the refund of any excess amount paid to him if as a result of such examination any over payment to him is discovered to have been made in respect of any work done or alleged to have been done by him under the contract.

30. All payments in respect of the contract during the currency of the contract shall be made through Electronic Clearing System (ECS) / National Electronic Funds Transfer (NEFT/RTGS). The successful tenderer on award of contract must submit ECS/NEFT/RTGS Mandate Form complete in all respects as detailed at Form No. 8 of the tender document. However, if the facility of ECS/NEFT/RTGS is not available at a particular location, the payments shall be made by cheque.

31. **Statement of Dispute: - Refer to clause 63 and 64 of GCC.**

32. **Integrity Pact:-**

As per office memorandum no F.No DPE/13(12)/11-Fin Dated 09.09.2011 issued by Ministry of Heavy Industries (DPE) all PSU should enter into Integrity pact in the required proforma in their procurement transaction/ Contracts with suitable changes specific to the situation in which the pact is to be used. The pact, entering into which would be a preliminary qualification for any bidder, essentially envisages an agreement between the prospective vendors / bidders and the DFCCIL, committing the persons/ officials on both sides not to resort to any corrupt practices in any aspect / stage of the contract.

A copy of pre contract integrity pact is enclosed as Form No. 20 for signature of bidder as acceptance. The details of Independent External monitor (IEM) shall be collected from the office of CGM.

SPECIAL CONDITIONS & TECHNICAL SPECIFICATIONS

PART - II

Chapter-1

General

TECHNICAL SPECIFICATIONS

For technical specifications, refer relevant Indian Railways Unified Standard Specifications, 2021 as amended upto date, CPWD DSR Volume I & II 2021, other IRS/IRC/IS Codes and Specifications as applicable.

For Non-Schedule items, the specifications in Tender Document / Schedule shall be applicable.

In case of any conflict between Technical Specification, Additional Technical Specification mentioned in Part-II and Part-III of Tender Document, Codes / Specifications mentioned above or otherwise or regarding correct applicability of relevant specification, the decision of Engineer shall be final and binding.

These specifications are intended for general description of quality and workmanship of materials and finished work. They are not intended to cover minute details. The work shall be executed in accordance with best modern practices and using special techniques of trenchless technology.

The Contractor shall read this Specification in conjunction with the standard specification of the Central Railway for sewerage and water pipe line works.

PART – II**Chapter- 2****TECHNICAL SPECIFICATIONS FOR MICROTUNNELING AND PIPEJACKING PART TERMINOLOGY AND GENERAL DESCRIPTION****2.2.1 Definitions**

For the purpose of this contract document, the technical terms pertaining to micro tunnelling works and their functional details are defined below. The definitions herein are meant only as guidelines. If other (or new) definitions or technical terms are used by the Contractor in his submittals, they shall be clearly defined by him.

2.2.2 Micro tunnelling

Micro tunnelling is a process of accurately excavating, non-man entry tunnels for installing underground pipelines, using laser guided remote controlled mini shields of diameters as small as 250 mm. The micro tunnelling permits accurate monitoring and adjusting of the alignment and level (either manually or automatically) as the excavation proceeds.

2.2.3 Pipe jacking

It is a process of lining a tunnel bore formed by a shield or other means by pushing especially designed jacking pipes (reinforced concrete or other pipes) into the tunnel bore, from a shaft (known as jacking shaft) to another shaft (known as receiving shaft).

2.2.4 Micro tunnelling and Pipe jacking:

It is an art of accurately installing smaller diameter pipelines (usually 250 mm diameter and above), without digging up to of ground surface, using a laser guided remote controlled mini shields for tunnel boring and pipe jacking technique for lining the bore with the product pipe.

The process of installing a pipeline by micro tunnelling and pipe jacking system comprises five parts:-

- (a) Micro tunnel boring machine (Shields)
- (b) Automated spoil removal system
- (c) Jacking system for pushing the jacking pipe and later on carrier pipe as needed
- (d) Guidance system to guide and tunnel excavation
- (e) Remote control system to operate the shield and other paraphernalia equipment.

2.2.4.1 Micro Tunnel Boring Machine (Shield)

It is mechanized, steer able mini boring machine (or shield) equipped with suitable cutter head in front to excavate small diameter tunnels under controlled conditions in which the tunnel face and ground water

pressure are continuously balanced as the shield excavates and moves forward. The operation and steering of the shield are remotely controlled with the aid of laser and/or CCTV system.

2.2.4.2 Automated spoil removal system

This system conveys the excavated spoil from the tunnel face to the ground surface for disposal. The spoil removal rate and the speed of the shield are fully or semi-automatically controlled in such a way to achieve minimal heave or settlement. There are three systems available for the conveyance of the spoil and they are slurry system, auger system, and vacuum system.

2.2.4.3 Jacking System

The jacking system comprises high thrust hydraulic jacks mounted in a jacking frame capable of exerting and required jacking force against a purpose built thrust wall to push the pipe and the shield forward through the ground. The jacking force is transferred evenly to the jacking pipe through a push ring connected to the pipe.

2.2.4.4 Guidance System

The guidance system comprises a laser beam device or a theodolite with laser beam attachment. The device is installed in the jacking shaft and the beam is set to the desired level, gradient and alignment.

Some machines have photo sensitive cells on the target panel located at the rear of the shield which converts the laser position into digital data. The data are then electronically transmitted to the operator's control panel where digital readout of the location can be made. Some modern shields have built-in capabilities to use the digital data and automatically make necessary steering adjustments to guide the machine to the true alignment and level.

The contractor shall submit complete details of the guidance system he proposes to use and shall incorporate appropriate check points and hold points in the Quality Assurance Manual that he shall implement in the contract.

The laser torch or theodolite shall be firmly supported in the jacking pit so that it is independent of any movement that may take place during the micro tunnelling operation.

2.2.4.5 Supplementary systems

The supplementary system required for micro tunnelling and pipe jacking operation shall include Muck disposal system, Pipe lubrication system, Grouting system, Guide rails, Entrance and Exit installations.

2.2.4.6 Jacking shaft (or Jacking Pit)

Jacking Shaft is an important temporary structure from where jacking operation is performed. The shaft is usually rectangular or circular in shape and built using liner plates, sheet piles or timber shoring. The size of the shaft shall be such that it is capable of accommodating the jacking equipment (and also the shield), jacking pipe and other paraphernalia or enable construction of manhole or chamber as needed. It

is usually constructed at locations where permanent manholes are to be built. The requirement for jacking shaft shall take full cognizance of the available working space and intended equipment.

2.2.4.7 Receiving shaft (Receiving pit)

A purpose-built temporary structure to receive and remove the tunnelling shield after its completion of a tunnel drive. The shaft is also rectangular or circular in shape and smaller than the jacking shaft. The size shall be sufficient enough to accommodate the tunnelling shield when it emerges into shaft after completion of a tunnel drive or construction of manhole or chamber as needed.

2.2.4.8 Footprint

The footprint of a micro tunnel drive shall be taken as the net area occupied by the jacking or receiving shafts. The size of the footprint depends on many factors including the micro tunnelling system and the length of jacking pipe used. The footprint requirement shall be an important factor, especially in congested and narrow roads when selecting the micro tunnelling system for a project.

The Contractor shall take into consideration of the space constraints and restrictions along the pipeline route for location of shafts and he shall ensure that the micro tunneling system selected for use in such sites shall require absolutely minimum space for the footprint.

2.2.4.9 Thrust wall

Thrust wall is a temporary concrete or steel structure built within the jacking shaft to transfer the jacking force to the ground during jacking operation. The jacking shafts may often have more than a single thrust wall and each thrust wall shall be perpendicular and square to the pipeline to be jacked. The thrust walls shall be in good contact with the soils behind so that wall can transmit the jacking force effectively to the ground without affecting the shoring system.

All the affected thrust wall shall be demolished fully or partly after completion of jacking operation involving in that wall.

2.2.4.10 Entrance Ring

A steel flange fitted with a rubber seal (a 10mm to 20mm thick circular rubber gasket whose outside diameter is same as that of the steel flange and the inside diameter is smaller than that of the jacking pipe) installed perpendicular to the pipeline at the entrance. The purpose of the rubber seal is to prevent the slurry or ground water from entering into the shaft through the pipe entrance.

2.2.4.11 Exit Ring

This is similar to the entrance ring except that the internal diameter of the rubber seal is much smaller than that of the jacking pipe and is installed to prevent the slurry or ground water from escaping the tunnelling machine when it emerges at the receiving shaft.

2.2.4.12 Guide Rails (or Jacking Table or Frame)

To facilitate placing of the micro tunnelling machine and pipes in the jacking shaft, a set of guide rails are installed in position on the base of the shaft. The guide rail assembly (also known as jacking table/frame) shall be carefully set up in the shaft to correct alignment and gradient so that the pipe when placed on it stays in line with the square to the pipeline alignment. The guide rail assembly shall be independent of the thrust wall so that it is not disturbed due to jacking force exerted onto the thrust wall.

2.2.4.13 Thrust Pressure Plate

The thrust pressure plate is usually a 50mm or 100mm thick steel plate installed between the jacks assembly and the thrust wall. The pressure plate enables the concentrated jacking load from the jacks to be transmitted evenly to the thrust wall.

2.2.4.14 Intermediate Jacking Station

For longer distance jacking, intermediate jacking stations, comprising a telescopic type jacking pipe assembly (usually made of steel), are used. A set of inter jacks and push ring are installed around the inner side of the female pipe of the telescopic pipe assembly. The intermediate jacking pipe assembly shall be installed at appropriate point and jacked-in along with the other jacking pipes.

2.2.4.15 Cutter head

It is usually a disc shaped wheel mounted on the face of the micro tunnelling machine (shield) and is driven by hydraulic or electrical motor, located within the machine. The excavation capabilities of a micro tunnelling machine depends very much on the type of cutter head used, its speed of rotation and average and peak torque etc.

Different types of cutter head configuration are used in micro tunnelling machines to suit the type and nature of the ground through which tunnelling is to be carried out. For example in soft ground tunnelling the cutter head shall have bits arranged in such a way to cleave and guide the soil into a chamber behind the cutter head through the openings provided in the cutter wheel.

In the case of rock or hard ground tunnelling the cutter head shall be equipped with suitable bits, roller bits or disc cutters for effective transfer of cutting energy to rock. The cutter head shall be configured appropriately considering geotechnical parameters such as compressive strength, tensile strength, elasticity, abrasively etc, about the material to be excavated. The tunnelling machine shall be equipped with a crushing chamber behind the cutter head with powerful crusher to crush the excavated rocks into smaller pieces. Moreover, the machine shall be capable of exerting a large thrust force/torque on the tunnel face to facilitate excavation of rock. The speed of rotation, torque, bit arrangement (and its structural and mechanical characteristic to withstand rock excavation for longer drive) of the cutter head and the thrust force the tunnelling machine is capable of exerting on to the rock face are important features to consider when selecting machines for tunnelling in rock.

2.2.4.16 Jacking Ring

Jacking ring or thrust plate is a purpose made structural fitting which shall be installed between the jacking assembly and the jacking pipe to transfer the point loads from the individual jacks into evenly distributed jacking force to the pipes being jacked. The ring shall be fabricated and machined, if necessary, so that it fits exactly onto end of the jacking pipe.

PART-II**Chapter- 3****PERFORMANCE REQUIREMENTS AND SITE RESTRICTIONS****2.3.1 Design Life**

For the purpose of designing the pipelines and the associated structures, the design life shall be 80 years. The materials incorporated in the works and the workmanship shall be of required quality to sustain the specified life span.

2.3.2 Level and Alignment Accuracy

The pipe shall be installed into place true to line and level. The maximum tolerance allowable in the displacement of the centre line of the laid pipe from the design centre line is 50mm in the horizontal plane and 25mm in the vertical plane but there shall be no back fall in any point.

There shall be provision to prevent the relative movement between pipes at the joints by the use of steel gaiters or other approved methods during jacking operation. A packing piece of compressible material shall be provided at each joint and shall be securely held before the pipes are lowered into the thrust pit. Details of proposals shall be submitted to the Engineer for approval.

2.3.3 Limits on ground settlement and upheaval

For the sections of pipeline crossing under nallas, roads and railways etc. the Contractor shall be required to incorporate in his tunnelling method measures to arrest the expected settlements so as to safeguard the integrity of the road surfaces, railway tracks and collapse of nalla bed. The Contractor shall ensure that the traffic flow along the roads is not affected in any way as a consequence of his work.

2.3.4 Limitation on Footprint :

The contractor shall be deemed to have visited the sites and carefully planed and located the shafts at convenient points along the roads so as to minimize the road area to be occupied by the footprint considering centre to centre distance of manholes. The contractor shall be deemed to have allowed for such site constraints and measures required, including working in the night and construction of decking over the shafts, provision of access roads for construction plant and machinery, to allow the traffic to flow, in his rates. He shall take the site constraints and restrictions into consideration when selecting the trenchless technology system.

2.3.5 Proper scheduling of operations :

It must be noted that the objective of the work is to

- (a) Upsize the existing sewer line and also to provide alternative sewer line at a higher depth to increase the sewerage flow capacity.

- (b) Failure to ensure proper time scheduling by the contractors may lead to delays or total inability in taking up the work on further pipe lines. Such delay or inability shall be entirely attributable to the Contractors.
- (c) Provide dry connection as and when directed by the Engineer / User department.

PART-II
Chapter- 4
CONTRACTOR'S SUBMITTALS

2.4.1 General information on submittals

To ensure compliance with the requirements specified in the Contract, the contractor shall make a number of submittals as described in the following clauses to the Engineer for approval by the specified time. The contractor shall ensure that the submittals prepared are of good professional standard, comply with all the requirements specified in the contract and complete with all details and information to enable the Engineer to evaluate and approve the submission. It shall be clearly understood by the contractor that he shall not commence any work without the approval of the submittals by the Engineer.

Submittals by the contractor shall, inter alia, include Contractor's method of construction, Micro tunnelling equipment description and literature, Jacking system and maximum jacking loads, Pipe designs and shop drawings and calculation demonstrating the ability to sustain maximum jacking loads, Intermediate jacking stations details, Lubrication system, Bentonite injection system details, Ground water control details, Entry and exit details, Jacking and receiving shaft design details, Thrust block details, Entry and exit details, Jacking and receiving shaft design details, Thrust block details, Muck removal and disposal, Horizontal Directional Drilling Equipment, Buried services details, detection equipment or any other trenchless technology system equipment, etc.

2.4.2 Submittal on Contractor's method of construction

The submittal shall contain a detailed explanation of various steps involved in the construction process. They shall include details of the equipment, specific manufacturer's instructions and guidelines pertaining to the project, a methodology statement outlining the operation of the equipment and details of materials including pipe materials, rubber ring, compressible packers and joining of pipes.

The submittal shall also include construction details of other permanent and temporary structures such as jacking and receiving shafts, cast in situ and precast manholes, or brick masonry manholes, thrust walls, and entry and exit of the shaft. The details of other equipment such as intermediate jacking stations, spoil removal system including slurry and feed pumps, control systems, slurry tanks and associated machinery, jacking frames, spacers, thrust ring etc. shall also be included in the submittal.

2.4.3 Submittal on geotechnical profile and geotechnical reports along the pipeline route.

The contractor shall establish the subsurface ground conditions and their range of variability along the pipeline before embarking on the work. He shall clearly identify the types of soil or rock that

is likely to be encountered during boring or tunnelling along the entire pipeline alignment. If found necessary, he shall carry out simple probing techniques (Geophysical soundings or Seismic refraction method) at closer interval and determine accurately the types of ground to be expected during boring/ tunnelling.

He shall prepare a comprehensive geotechnical profile along the pipeline route with detailed descriptions of the types of soil or rock to be expected during boring/tunnelling.

The contractor at his own cost shall carry out essential geotechnical investigations and tests (Field as well as laboratory) immediately after award of the work for enabling him to select appropriate equipment methods for which no extra payment shall be admissible in this regard. The contractor shall be solely responsible for geotechnical investigations and the inference drawn from such investigations as well as the adequacy of the equipment and method adopted by him. However, other progress of works like construction of shafts etc. may be continued simultaneously.

2.4.4 Submittal on jacking pipes design.

The contractor's attention is drawn to the requirement pertaining to the design, manufacture and handing of the jacking pipes in clause 5.3.

The contractor shall be the approval of the Engineer, engage a reputable pipe manufacturer to design and manufacture the jacking pipes. In which case, the submittal shall include the manufacturer's name, address, contact telephone and facsimile numbers and the manufacturer's quality assurance / control and testing plan for the jacking pipe. The manufacturer's representative's name shall be also included in the submittal. A dimensioned drawing of the jacking pipe with design calculations from the manufacturer shall be also submitted to the Engineer for approval.

In case the contractor intends to manufacture the pipes in his own facility set up for this purpose, he shall submit all details of equipment, design and process to the Engineer for approval.

The pipes shall conform to latest version of respective BIS standards.

2.4.5 Submittal on micro tunnelling system / Tunnel Boring System

The bidder / contractor shall furnish name of the micro tunnelling / Tunnel boring equipment model, manufacturer's technical literature for the equipment and all other data along with their bid. Any amendments deemed necessary by the Contractors shall be submitted along with the geotechnical profile within 3 days of submission of geotechnical profile to DFCCIL. The submittal shall include information to ensure that the micro tunnelling equipment proposed for the project meet with the general requirements specified in these specifications and also the anticipated geological conditions as assessed by the contractors. The submittal shall also include a certification from the manufacturer of the equipment about adequacy in the anticipated geotechnical conditions as also design calculations showing maximum anticipated jacking or pullback force and torque needed for tunnelling/boring.

2.4.6 Submittal on site layout

Contractor's attention is drawn to various clauses in the document with regard to the site constraints and space availability in all the sites. The contractor shall carefully examine the site and prepare site layout plans showing the arrangement of various ancillary equipment required for works, such as approaches for equipment, spoil removal equipment and slurry tanks, Bentonite systems/mud recycling system, generators, control cabin, tracking facilities, crane, storage of pipes etc for each drive and submit them progressively to Engineer for approval.

2.4.7 Submittal on existing pipe levels, location of shafts and new pipeline alignment

The contractor shall survey and verify the as-built invert levels of the upstream and downstream pipelines and manholes shown on the contract drawings for all the sites. The contractor shall confirm or insert the correct as-built levels in the contract drawings and submit them to the Engineer for necessary amendments and re issue of the contract drawings for construction. Under no circumstances the contractor shall commence works without verifying the as-built levels and obtaining the approval of the Engineer.

The Contractor will be required to set out and plan and actual route for the pipe laying well in advance of actual excavations. Trial holes/ probing and other preliminary survey must be carried out and the resulting information carefully plotted. A copy of all preliminary surveys and the results of exploratory excavations must be supplied to the Engineer.

For convenience of construction, if the Contractor prefers changes to the pipeline alignment or the location of manholes shown on the contract drawings, he shall incorporate such changes in his submittals to the Engineer for approval. The Engineer would evaluate and approve if the proposed changes are found to be economically and technically, and functionally acceptable. It shall be clearly understood by the Contractor that any construction risks and additional costs arising as a result of Contractor's changes made to the original pipeline design shall be entirely borne by the Contractor.

2.4.8 Submittal on jacking and receiving shaft design

The Contractor shall submit the design and construction details of the jacking and receiving shaft and their proposed locations along the pipeline route to the Engineer for approval. The Contractor's design shall ensure that the shaft dimensions are absolute minimum required and method of construction shall be such that the shafts are constructed without causing unacceptable obstruction to the existing traffic flow in the vicinity of the construction. The minimum size of the shaft shall, however, permit construction of appropriate manhole / valve chambers as per the requirements. The Contractors shall also submit design and construction details of decking, if required, for the shaft. The Contractor shall be deemed to have allowed for in his Bid for such decking work necessary maintain the traffic flow.

The submittal shall also include details on shoring system, entry and exit arrangement, thrust wall layout and design details, general layout of guide rail and jacking table arrangement etc.

2.4.9 Submittal on buried services and obstructions

The contractors shall investigate and determine the actual location of the buried or over the ground services and physical obstructions, if any, along the pipeline route and at his chosen locations of the jacking and receiving shafts and submit service location drawings to the authorities responsible for electricity, telecom water, pipelines, gas etc. and obtain their approval or permission to excavate in their vicinity.

The Contractor shall not interfere with the operation of any existing or proposed service. He shall carefully plan the pipeline route and the locations of the shafts and manholes and shall identify the service that require diversion well ahead so as to give ample time to the authorities to divert the services or give approval to carry out the diversion by others. Where applicable, the Engineer would assist the contractors in getting the approval as expeditiously as possible from authorities.

If in the opinion of the Engineer any services that are within the manhole proper or affecting the alignment and require permanent diversion, they shall be diverted at the expenses of the DFCCIL Expenses for all other diversions and temporary protection of services shall be borne by the Contractor.

Any consequential delay or expenditure arising from Contractors' carelessness or lack of foresight on this matter shall be entirely borne by the Contractor.

The Contractor shall fully co-operate with the Engineer and the authorities and shall have no claim for delay due to such relocation of services.

2.4.10 Submittal on monitoring of ground settlement and upheaval

The contractor shall monitor ground movement / Rail surface movement daily at the start of jacking operation and end of the jacking operation on that day and submit in an approved format the settlement or upheaval caused by the micro tunnelling and tunnel boring works to the Engineer. They shall depute competent P. Way gang under control of Competent Supervisor to monitor safety of train movement.

2.4.11 Submittal on safety

The Contractor shall be solely responsible for safety of the workmen, Engineer's staff and third party. The contractor shall implement a comprehensive safety plan for his work people and Engineer's/ Employer's staff of Third party. He shall comply with all relevant acts governing safety on construction site. He shall submit to the Engineer the details of the arrangements he made with the fire brigade, local health authorities and the availability of medical staff, first aid equipment ambulance, sick bay etc. He shall give the names and contact telephone numbers (24 hours) of the occupational health and safety personnel. Beside he shall submit a list of safety equipment that he would provide to all the workers on site. The Contractor shall appoint a Safety Office or Safety Engineer at all times who shall be the responsible person for all safety related matters pertaining to the contract. Name of such person shall be communicated along with the submittals on safety. The contractor shall comply with the guidelines issued by any competent authority regarding safety at work site especially safety of persons working inside any pipeline-

new or functioning. The Contractor shall provide and maintain signboards, warning lights, become, barricades, lighting, fencing etc. at sites.

2.4.12 Submittal on quality assurance/control plan

The Control shall implement a Quality Assurance Program approved by the Engineer for the manufacture of jacking pipes and for actual installation of the pipes by micro tunnelling and pipe jacking method on site. The Quality Assurance Programme shall be maintained in accordance with the provision of the manual. No works shall commence until the Quality Assurance Manual has been approved by the Engineer.

The Contractor's Quality Assurance System shall incorporate but not be limited to the following:

- (i) The Quality Assurance and Quality Control procedures covering all materials, design, manufacture, supply and installation carried out by the Contractor and any of his sub-contractors.
- (ii) Such tests necessary to demonstrate that materials comply with the requirements of this specification and the requirements of the relevant Standards and Codes.
- (iii) Contemporary records to be maintained pertaining to progress of the work.

2.4.13 Submittal on Contractor's personnel

The Contractor shall appoint a dedicated Project Manager along with at least one dedicated site engineer experienced in micro tunnelling work for this contract.

The contractor shall note that the skill of MTBM operator and their assistants is crucial for successful execution of work. The contractor shall submit complete information for the operators proposed to be employed for the work.

The contractor shall submit a list of his key site staff including their CV to the Engineer along with the bid. No change in the personnel shall be permitted subsequently without written permission of the Engineer. He shall submit the diagram showing the communication link within the site to Contractor's Head Quarters along with designation and telephone numbers of key staff for the Engineer's record. The Engineer reserves his right to reject any person who he thinks no suitable for the contract and the Contractor shall be obliged to replace such person immediately.

2.4.14 Submittal on remedial measures to be adopted by the Contractor

The Contractor shall take each and every precaution to ensure that the tunnelling or drilling equipment will successfully excavate along the chosen pipeline alignment before the commencement of the operation. Once the tunnelling/ drilling is commence in a drive, the Contractor will be held fully and wholly response for the successful completion of the tunnel excavation and retrieval of the shield from the receiving shaft or for completion of pilot bore and hole enlargement upon back-reaming in the event of inability to complete the drive, due to break down or any other reasons, the Contractor shall be fully responsible to recover the equipment safely from the ground and restore the incomplete work to the original condition at his risk and

cost by a method approved by the Engineer and the concerned authorities within time stipulated by the Engineer or the concerned authority. However, it should be noted by the contractor that no pilot bore is permitted by the Railway under the track.

It shall be clearly understood by the Contractor that the occurrence of such an event is preventable as such an occurrence is generally due to Contractor's negligence in the 'preventive maintenance' of the equipment or driving of it to true level and gradient or his failure to determine accurately the expected ground condition before commencement of the excavation.

The Contractor shall in his submittal clearly state the measures that he would implement to retrieve the shield without causing interruption to railway or road traffic etc and without causing any damage to the property belonging to the PWD or Railways/MCGM etc. The cost for such retrieval measures or any consequential expenditure or delays arising from thereof shall be entirely borne by the Contractor. Any failure to remedial measures shall be entirely at the risk and cost of the Contractor.

Any abandoned hole or tunnel must be grouted completely at the Contractor's cost so as to prevent subsequent settlement.

2.4.15 Effect of Approval and Acceptance of Proposals

Approval or acceptance by the Engineer of any proposal for executing the works, including drawings specifications or resources employed under the Contract shall not relieve the Contractor of his responsibility for any errors thereon and shall not be regarded as an assumption of risk or liability by the Corporation. The Contractor shall have no claim under the Contract on account of the failure or partial failure or inefficiency of any plan, method of work or equipment approved or accepted by the Engineer. Such approval or acceptance shall be considered to mean only that the Engineer had no objection to these proposals.

Notwithstanding any approval or acceptance by the Engineer, the Contractor shall remain fully responsible for completing the works correct in every detail.

2.4.16 All submittal within 14 days of commencement.

PART-II
Chapter- 5
PRODUCTS

2.5.1 Standards and Codes

Except as otherwise stipulated in this Specification and in the Railway's Standard Specifications, all materials and workmanship shall comply in all respects with requirements of such standard and specifications, codes and other standards issued by the Bureau of Indian Standard (BIS) and current at the date of bid as may be applicable to any part of the Works of this Contract. In the event there being no relevant Indian Standard Specification, other relevant standard, specification, current at the date of bidding such as the British Standards Institution, American Society for Testing Materials (ASTM), German Standards (DIN), Japanese Standard for Water and Sewerage (JSWAS), Standard Association of Australia (AS), or Singapore Standards (SS) and or of the or any other equivalent standard approved by the Engineer shall apply. If after the date of invitation to Bid there is an amendment to a standard specification relevant to the Contract, the Engineer will direct whether the amendment is to apply.

In the event of there being any conflict between this Specification, the Drawings and any Standard Specification forming part of this Contract, this Specification shall take precedence over the drawing, Railway's Standard Specification, codes and other standards in that order of precedence.

2.5.2 Selection of Micro tunnelling Equipment

The contractors shall be responsible for the selection of a suitable micro tunnel boring machine capable of excavating the materials including rocks and mixed ground that may be encountered at the sites.

The contractor shall ensure that geological and geotechnical information he obtains or possesses for the site is adequate to accurately determine the types of soil and rock that may be encountered during execution of the project. The contractor is deemed to have carried out sufficient geological and geotechnical investigation of the sites and testing of the soil and rock (to determine compressive strength, tensile strength, abrasively, cut ability, mineral make up of the rock etc as may be necessary to determine the ability to successfully tunnel through the ground) as necessary at his own cost before the selection of the micro tunnelling system.

The contractor shall also ensure that the micro tunnelling system he selects for the project shall successfully excavate in the wide ranging ground conditions from clayey and sandy strata with boulders and loose rocks to rocky strata that may be encountered at the sites.

Contractors shall pay particular attention, when selecting the tunnelling equipment for the project, to ground water level fluctuation and the wide ranging subsurface soil strata from clays, sands,

gravels, soft soils with boulders and loose rocks to basaltic rock that may be present at the sites. The tunnelling equipment selected for the project shall have appropriate cutter head equipped with suitable cutter bits to excavate soils and rock below the water table.

The tunnelling equipment shall be capable of balancing the ground water pressure supporting the excavated tunnel face at all times. The equipment shall be articulated to enable remotely controlled steering, in both the horizontal and vertical directions. It shall be capable of preventing rotation and rolling movement of shield's body during the drive. The tunnelling equipment shall, interalia, have the following features.

- (a) Able to excavate and crush formations, loose rocks, boulders of unconfined compressive strength and cut ability in excess of 300 Mpa with no requirement for replacing the cutter head or bits and other components when geological and geotechnical conditions change during a drive. The compressive strength mentioned above shall not be construed as the maximum anticipated and the contractor shall be solely responsible for selection of appropriate equipment.
- (b) Able to cut through rock having high tensile strength, elasticity, hardness and abrasively.
- (c) Powerful cutter head, capable of exerting large and/or surging torque to break up rocks and boulders.
- (d) Powerful crushing force, preferably with eccentric radial motion of the crushing device, capable of crushing gravel, boulders and rock.
- (e) Equipped with suitable steering and guidance system that ensures easy steering control.
- (f) Equipped with a suitable lubricating system arrangement.
- (g) Ability to provide for an Intermediate Jacking Station, if needed
- (h) Suitable instrumentation to measure deviation from the designed level and grades. The equipment proposed for the project shall be meet the above-mentioned criteria or other wises it will not be permitted to use the project.

The micro tunnelling equipment proposed for the project shall meet the above-mentioned criteria or otherwise it will not be permitted to use in the project.

2.5.3 Concrete Jacking Pipe (Minimum NP-4 Class)

The pipes for jacking operation may precast reinforced concrete pipes or other approved pipes. The concrete jacking pipes shall be manufactured by a centrifugal or vertical casting process to be approved by the Engineer. Design, manufacture, and factory testing of the pipes and specials shall be to A.S. 1342 of S.S. 183 or JSWAS A06-1989/A-2-1973, ASTM C76M or other acceptable standard and shall also meet the basic requirement specified in I.S. 458 & I.S. 3597 or its equivalent standard as amended up to date. The clear cover of concrete over steel reinforcement on the wet face shall not be less than 50mm.

The outside and inside diameters of the pipe shall be such that they match the dimensions of the tunnelling equipment or vice versa. The standard length of the pipe shall be 2.5m. However the length of the pipe shall be shortened if desired by a contractor to suit the site conditions subject to the Engineer's approval.

Precast concrete pipes, if manufactured locally by the Contractor, shall be manufactured using Batch Mix Concrete of required grade. Complete details of the Batch of concrete like its Grade, WC ratio, maximum aggregate size, additives shall be maintained for each batch. Six cube samples shall be taken from each batch and tested for 7 & 28 days compressive strength in a laboratory situated at factory or any institution approved by the Engineer. If the tested cubes fall the requirements, the finished pipe shall be liable for outright rejection after confirmation from NDT test results.

The Engineer's representative shall have full authority to inspect any material or finished product and reject the same if not found conforming to the standards. The Contractors shall make his representative available to the Engineer's representative during such inspections and testing failing which the Engineers representative shall be at liberty to take ex-party decision which shall become binding upon the Contractor.

The pre-cast reinforced concrete pipes shall be sufficiently reinforced with steel to withstand all stresses induced by handling, jacking, earth and water pressures and all working loads at the depth at which they are to be used without cracking, spalling or distortion. The pipes shall be of at least strength class NP4. A load factor (for the maximum jacking force) of not less than 2.0 shall be used in the calculations to determine the strength of the pipes required. The strength of the pipes shall be tested both the three-edge bearing test. When subjected to the design load in such a test, the load required to produce the crack width of 0.25mm on the pipe shall be in accordance with IS code 458. All such tests shall be carried out at the expense of the Contractor at pipe manufacturing unit, or any other institution as suggested by the Engineer and Engineer's representative will witness the test. The frequency of the Three Edge Bearing test shall be at least once in 3 months or every 75 pipes of part thereof for each diameter.

When designing the jacking pipes, the contractor shall take into consideration jacking load, pipe stiffness, corrosion resistance, flexibility, durability, joint efficiency etc. The Contractor shall submit full details of his proposals for the pipes, giving detailed drawings showing sizes, reinforcement and type of joints, calculations, together with the name of the proposed manufacturer, the place of manufacture and the manufacturing process to the Engineer for approval along with a consent letter from manufacturer of the pipes from such manufacturer. All workmanship and materials used in the manufacturer shall be subject to the approval of the Engineer who shall be authorized to inspect materials at source and the manufacturing processes in the factory at any time.

Contractors shall allow for eccentric loading in the pipe, rather than an axial loading during the installation of the pipe. The Contractor shall take precautions to minimize the resultant pipe

stresses in a jacking and to achieve a trouble-free jacking operation. The eccentric loading shall account for maximum steer ability.

The contractor shall note that currently no jacking pipe suitable for micro tunnelling work is available in India. The contractor shall make provision in contract either to manufacture for jacking pipes, in Mumbai as per specifications or procure them suitably. He shall provide information on contractors jacking pipe manufacturing or procurement capability along with his bid. In case of procurement from manufacturer, the contractor shall allow sufficient time for import and clearance of the consignment from various authorities and delivery to the site as applicable.

- (a) Pipe shall be straight and uniform with square ends. The joints shall be well formed to allow efficient transfer of jacking load from pipe to pipe.
- (b) Pipe joint shall be fitted with compressible packer for better distribution of jacking load.
- (c) The jacking frame, jacks and steering head shall be property aligned along the designed alignment and grade and the whole assembly shall be square and at right angles to the trust wall.
- (d) Steering corrections shall be made gradually to minimize abrupt misalignment angles between the pipes.
- (e) The pipes should be provided with well formed arrangement for groove for rubber gasket.

The pipes which are to be used in the construction of the works shall be sufficiently cured before they are brought to the site of the Works. They shall be handed with extreme care to prevent the edges of the pipes from chipping. The pipes shall be staked in shade or adequately protected from severe sunrays. The Engineer may reject any pipes he considers not suitable for the works and these rejected pipes shall be removed from the site immediately. After factory testing and before dispatch, every pipe shall be marked in accordance with the Standard used. In addition, each pipe shall be marked with a number corresponding with the order of manufacturer and date of manufacture and Grade of Concrete. Test Certificates from the manufactures or other relevant authority shall be submitted to the Engineer.

Some of the sites may have limited or restricted storage space for stacking of jacking pipes the Contractor shall therefore schedule the supply of pipes to the sites in such a way that only absolute minimum numbers of pipes are brought to the site at a time.

2.5.4 Pipe Joints

The jointing arrangement for the jacking pipes is crucial in terms water-tightness, flexibility and smooth transmission of jacking force. Spigot ended jacking pipe with recess to receive rubber rings and steel or stainless steel couplings (collars) or other acceptable joints shall be used in pipe jacking application. The spigot and socket joints shall be flush from outside as well. The contractor shall submit joint details to the Engineer for approval.

2.5.5 Rubber ring joints

The joint rubber rings supplied and installed shall be of the Cornelius rubber ring type or similar approved and shall be capable of accommodating 2 degree deflection at each joint. Joint rings shall meet with the latest edition of I.S. 5328 and B.S. 2494 part 2 or be of approved quality by the Engineer. The properties of the joint ring shall be between those specified in BS 2494 for grade D and grade B.

The testing of rubber ring shall confirm to IS. 3400 and also IS 5382.

The Contractor shall indicate the grade of rubber rings he intends to use and submit samples for approval prior to incorporation in the Works. The grade, type or source of supply of rubber rings shall not be changed without the written approval of the Engineer.

2.5.6 Pipe Couplings (Collars)

Where pipe couplings (collars) are used for pipe joints, it shall be made of weldable structural steel top BS 4360 Grade 43 or equivalent I.S. The steel coupling shall be of such dimension and thickness so that when inserted into the pipe, it fits exactly into the recesses in the pipe. The joint so formed shall be watertight. The joint details shall be approved by the Engineer. Before fitted to the pipes, the collars shall be coated with approved anti-abrasive and anti-corrosive materials such as polymorphic resin or other materials as approved by the Engineer.

However, all collars in case of works across railway tracks shall be of stainless steel only.

2.5.7 Compressible packers

Suitable compressible packers shall be used of the joints for distributing the jacking force evenly though the wall of the jacking pipes. Uneven transfer of jacking force from a pipe to another shall result in concentrated and excessive stresses in the pipe which can cause the pipe to crack. Contractor shall submit details of the compressible packers for Engineers approval.

2.5.8 Identification of pipes, rubber rings etc.

Every pipe made shall be clearly and indelibly marked upon it an identification number, class, batch of concrete, diameter and date of manufacture. Every finished pipe shall be tested for dimensional conformity and non destructive testing with Schmidt Hammer or any other method as approved by the Engineer. Full records are to be maintained of each pipe test and for each individual pipe the date manufactured, cleared after testing and supplied.

If the pipes are to be procured from a manufacturer, the Contractor shall make arrangements for visits of the Engineer's representatives for inspection and testing as and when deemed necessary by the Engineer. All expenses in connection with such visits shall be borne by the Contractors. After the satisfactory completion of testing and approval of the pipes by the Engineer the pipes shall be stored at factory premises during the period awaiting delivery.

No pipe shall leave the manufacturer's yard for the site unless it is tested.

2.5.9 All works to be water tight

(a) The drains, manholes and all joints of pipes must be made thoroughly sound and water tight, and any joint which may be proved to be leaky at any time during the progress of the works or during the contractors' subsequent period of maintenance shall be immediately made sound by the contractors at their own expense. The contractors, when required by the Engineer shall at their own cost prove all works to be water tight by filling it with water to such height as the Engineer may determine. Any additional precautionary measure or appliances that may be found necessary to ensure the water tightness of the manholes, flush tanks, disc plug in junctions and the joints of pipes shall be adopted by the Contractor without extra charge, the responsibility of making them completely water tight resting upon the contractors.

(b) Immediately after the test with the double disc or cylinder as mentioned in clause No. 5.9(a) has been completed and any defect hereby disclosed have been made good the Contractor shall prove the joints of the stretch of under-ground pipes whether of stoneware, cast iron or R.C. pipes, to be water tight by filling in pipes with water before filling in the trench to the level of 1.50M above the top of the highest pipe in the stretch and heading the water up for the period of one hour or such further time as the Engineer may direct. The apparatus used for the purposes of testing shall be approved by the Engineer. The contractor if required by the Engineer shall make the excavation dry and keep it so during the period of testing. No test applied to part of a stretch of pipes shall be considered conclusive nor shall it be deemed to obviate the necessity of the application of the test to the whole of stretch when completed. The loss of water over a period of 30 minutes should be measured by adding water from a measuring vessel at regular 10 minutes and nothing the quantity required to maintain the original water level. For the purpose of this test the average quantity added should not exceed 1 litre/ hour/ 100 linear metres/10 mm. of nominal internal diameter (0.2 gallons/hour/100 linear feet/inch of nominal internal diameter.

Any leakage including excessive sweating which causes a drop in the test water level will be visible and the detective part of the work should be removed and made good.

The manholes when they have been raise above the highest subsoil water level expected in the monsoon shall similarly be tested for water tightness as for the pipe lines. The procedure for this shall be as follows:-

The mouths of all pipes entering the manhole shall be suitably plugged with brick, masonry or wooden or any other type of plug. The manhole under test shall then be filled with water upto the general sub-soil water level and observed for a period of one hour. If the level does not drop by more than 50 mm. in one hour it shall be assumed that the manholes is water tight.

During the period of the test the outside trench shall be kept free from any accumulation of subsoil water in case of a drop of more than 50mm in the water level the contractor shall note the places from water the leakage is taking places and take steps to stop the leakage.

For R. C. pipes diameter 1200mm or more through visual inspection of inner side of pipe shall be carried out with a trained eye.

(c) Cleaning of the pipes

As soon as a stretch of pipes whether of stoneware or Cast iron or R.C. Pipes has been laid complete from manhole to manhole, the Contractor shall run through the pipes both backwards and forwards a double disc or solid or closed cylinder 75mm. less in diameter than the internal diameter of the pipes. The open end of an incomplete stretch of pipe line shall be securely closed as may be directed by the Engineer to prevent entry of mud or silt etc.

(d) If as a result of the removal of any obstruction the Engineer considers that damages may have been caused to the pipe lines, he shall be entitled to order length to be retested at the expense of the Contractor. Should such retest prove unsatisfactory, the contractor shall at his own expense amend the work and carry out such further tests as are required by the Engineer.

(e) It shall also be ascertained by the Contractors that each stretch from manhole to manhole is absolute clear and without any obstruction by means of visual examination of the interior of the pipe line suitably enlightened by projected sunlight or otherwise.

2.5.10 Fracture of pipes

(a) In the event of pipes being fractured after being to all appearances properly laid whether due to imperfect loads have been formed or the material for refilling have been improperly selected or to any other cause, the Contractor in every instance will be held responsible and will be called upon to replace such defective pipes at his own cost, if such defect appears before the expiration of the period of maintenance.

(b) Any pipe or length of pipes found to be defective shall be immediately removed and replaced at the Contractor's expenses and leaking joints shall be remade, the inspections and tests shall then be repeated as often as necessary until the whole line under inspection or test is accepted by the Engineer.

2.5.11 All works to be clear, clean and perfect

The contractors shall after completion or whenever required by the Engineer, prove all pipes and fitting to be clear clean and perfect, and for this purpose shall, at their own expense and in the presence of the Engineer or his appointee, provide suitable instruments and appliances and pass them through the pipes and shall if required, throw in water and show that it passes freely through every portion of the work. Brick, mortar and rubbish shall not be allowed to fall into the manholes of sewer lines while fixing or if allowed, shall be removed by the Contractors at their own expense.

“During the cleaning operations of newly constructed sewer and manholes, contractors shall take for the safety of labourers, all precautions, as detailed under of General Specifications.

2.5.12 Tests on Jacking Pipes (minimum NP-4 Class) Factory Tests

One pipe out of every 75 pipes or part thereof manufactured for each diameter shall be tested for Three Edge Bearing Test in a laboratory at pipe manufacturing unit or at any institution approved by the Engineer at the Contractor's expense.

Every pipe shall be subjected to follow dimensional conformity tests and the tolerance shall be within limits as indicated below –

Length

Pipe Dia in mm	Tolerance for all types of pipes in mm
1000 and above	+25

Perpendicularity of faces	Tolerances in mm Pipe Dia in mm	
	RCC	Steel Jacking Pipe
Above 1000	8	1.6

Deviation from straight	
Pipe Dia in mm	Tolerance for all type of pipes in mm
Above 1000	±10

Deviation from pipe dia	
Pipe Dia in mm	Tolerance for all type of pipes in mm
Above 1000	+0, -16

PART II
Chapter-6
EXECUTION

2.6.1 Information for the execution of works

Where specified in the Drawings and Bills of Quantities, sections of the pipeline shall be laid by micro tunnelling and pipe jacking or other method approved by the Engineer. The word tunnelling in this Contract implies micro tunnelling and pipe jacking.

The Contractor shall be responsible for inspecting the sites and familiarizing himself with the conditions under which the work will be performed and with all necessary details including geotechnical investigations and buried service location as to the orderly and successful execution of the work. The omission of any details shall not relieve the Contractor of full responsibility for the satisfactory installation of the work in its entirety. No monetary or other claims made by the Contractor on the grounds of want of knowledge will be entertained by the Corporation.

Plans and details of the equipment, materials and the method of construction to perform and complete the work shall be submitted by the Contractor and must be approved by the Corporation during the bidding stage and also by the Engineer during the construction stage before commencing these operations. Approval by the Engineer shall not relieve the Contractor of his sole responsibility for the efficiency, reliability, and soundness of the method employed in completing the work in a satisfactory manner.

The contractor is advised that it shall be his sole responsibility to ascertain for himself the extent of work that is required to be done in site and to generally obtain his own information on all matters affecting the execution of the whole of the works involved in this contract to the entire satisfaction of the Engineer. No claim of extras in consequence of any alleged ignorance in any aspect will be entertained by the Engineer. It must be clearly and definitely understand that the contractor shall be held solely responsible for making all necessary arrangements and co-ordinating with all relevant Authorities, specialists, Sub Contractors etc. to ensure satisfactory and timely completion of this contract.

2.6.2 Execution of works-General

The Contractor shall be fully responsible for the design and construction of the jacking/launching and receiving pits, thrust wall, installation of jacking equipment, installation of any other equipment, sheeting/ shoring, bracing, etc., and for the efficient execution of the work. Full details of his proposals, including plant, Micro Tunnel Boring Machine (MTM), ancillary equipment, operating procedures, jacking pit and intermediate jacking stations, rock cutting tools, repair of leakage etc. shall be submitted to the Engineer, and shall be fully satisfactory to him before construction. However, review of the plans shall not relieve the Contractor from his responsibility to prove a safe and satisfactory arrangement.

The Contractor shall be required to monitor closely the progress of the tunnelling/jacking and drilling operation. Daily manual logs or site records of thrusting pressures, torque, bentonite injection rates and line and level measurement shall be properly maintained in addition to any computerized data logging and shall be available to the Engineer's representative at all times. Such records shall be duly signed by the Contractor's site in-charge. If the Contractor fails to maintain and produce such details before the Engineer's representative on site, the Engineer's representative may order suitable steps including suspension of the work without prejudice to any other rights of the Engineer. The Contractor shall be solely responsible for such actions ordered by the Engineer's representative.

It is the responsibility of the Contractor to ensure that the completed tunnels are watertight. If leakage occurs before completion or during the maintenance period, the Contractor shall carry out any remedial work that may be necessary to make the works watertight all at his own expense.

2.6.3 Location and verification of buried services

The Contractor will be held solely responsible for making his own investigations of any buried services in the vicinity of the Works and to protect them from getting damaged due to his work. Contractor shall allow in his rate for any extra costs for detecting all obstructions and buried services including appropriate measures to protect the services and temporarily divert the same in consultation with the concerned agency with its prior approval regardless of whether they are indicated on the drawings or not. It shall be the Contractor's responsibility to obtain any permission from such agencies. The Engineer/ Employer may issue necessary recommendation letters if required.

The contractor shall engage at his own cost a competent service detecting technician or agency who shall have state-of-the-art detecting equipment to locate and verify all the buried services such as pipeline, water telecom, electricity, gas and all other services, and abandoned services and structures well ahead of commencing the works.

The detector shall be able to receive narrow signal responses from buried services in order to pinpoint the position and direction of the services. It shall also be able to pick up the position and direction of different services in congested area and detect the buried services regardless of almost any environmental interference.

Combination of Ground probing Radar (GPR) and Electromagnetic Location (EML) testing is considered effective for locating the underground utilities and buried objects. The lines tested using GPR and anomalies located using EML shall be topographically surveyed using a Total Station / Theodolite at the same time as the geophysical testing is carried out.

The information so collected shall be submitted to the Engineer after getting it confirmed from the respective agency. It shall be clearly understood by the Contractor that no work shall be carried out without locating all the buried services and he will be held solely responsible for any consequential expenses and delays if he ignores this specific requirement or fails to locate any services along the route.

The Contractor shall take every precaution that in the opinion of the Engineer and as advised by the owner of the utility is necessary for the protection from injury of all existing and proposed water, drain, pipeline and other pipes, electric and telephone conduits, and other existing works, roads, and services wherever encountered or which are adjacent to the works, and to maintain the same until in the opinion of the Engineer the general progress of the work renders further protection unnecessary. All damage occasioned by the Contractor to these works and services shall be repaired at once at the Contractor's risk and cost, as directed by and to the satisfaction of the Engineer.

All the buried services shall be investigated/ located as per the above requisite conditions and their location shall be plotted on drawings to be submitted to the Engineer. No extra payment will be admissible in this regard.

2.6.4 Site Investigation

The Contractor's site investigation for micro tunnelling or any other acceptable trenchless technology work shall be critical and the most important engineering work to be carried out before commencement of work on site. The contractor shall clearly understand the importance of establishing the subsurface ground conditions and their range of variability along the pipeline route well before embarking on the actual works. There should not be any room for unforeseen ground conditions and is absolutely necessary for the Contractor to know what is to be encountered during the tunnelling operation. The contractor shall be deemed to have accurately established the types of soil and rock strata along the tunnel bore and their range to enable him to select the equipment/ machines and to set-up and operate correctly.

2.6.5 Subsurface investigation

The subsurface investigation shall include study of all existing geological and geotechnical information for the area including the information pertaining to the project and the location maps of all the services in the area from the utility companies/authorities for initial planning. Data on abandoned and existing obstruction foundation, piles and the structures in the vicinity of the alignment shall be also collected. Field survey using utility services locator and trail trenches may also be carried out to verify the location of the services and obstructions.

Mapping out of the subsurface soils/rock profile along the pipeline alignment and locating underground utilities and buried objects by geophysical testing such as the combination of Ground Probing Radar (GPR) and Electromagnetic Location (EML) testing is considered useful in determining the nature of ground to be aware of similar state of the art ground probing/mapping technology currently available on the market and to have made provision for its use in the project as part of his subsurface investigation works.

The contractor shall be deemed to have in possession of all the information and data required to accurately evaluate the subsurface conditions before commencement of any works.

2.6.6 Geological and geotechnical evaluation

The contractor shall not be allowed for any extra costs in his rates to carry out full geotechnical investigation along the proposed alignment of sewer line, as necessary for micro tunnelling operations including delivery of core samples to the Engineer in properly indexed core boxes and submission of report (5 copies) to the Engineer. No extra payment shall be admissible in this regard. He shall also obtain, studied and evaluated all the geological and geotechnical data for the sites including any data if available with the Railway for the sites and made his own judgment and conclusion on the types of soils and rock to be excavated along the pipeline route. The Contractor must supplement this information possessed by him with appropriate geotechnical investigation prior to selection of appropriate tunnelling/ drilling machinery.

2.6.7 Bore logs and ground probing

Sufficient numbers of boreholes shall be taken by Contractor, if deemed necessary, in areas where the soil strata is complex. The contractors shall also carry out simple probing techniques at closer interval to reaffirm the types of soils to be encountered along the pipeline route. The Contractor should submit Geotechnical profile along the route of the pipeline and buried service data for particular work package as per the schedule for submittals.

The Contractor shall collect soil/rock samples at the level of the proposed pipeline in presence of the Engineer's represent and get the same tested for Unconfined Compressive Strength (UCS) in the Municipal laboratory or at any laboratory approved b the Engineer. Samples taken in absence of the Engineer's representative and tested in a laboratory not approved by the Engineer shall not be valid for determination of the any parameters.

2.6.8 Groundwater Investigation

Ground water condition is one of the critical data required when selecting the micro tunnelling system. Ground water affects the safety of the excavation face, start and exits of the tunnelling/ drilling equipment from the shafts. Uncontrolled extraction of water from the surrounding during excavation can affect the adjacent structures. Piezometric pressure, water leakage, ground water level and etc. shall be carefully checked before and during tunnelling/ drilling works.

2.6.9 Ground stabilization

It shall be responsibility of the Contractor to maintain stable soil conditions at the jacking face to prevent loss of ground above the jacking operation and movement of the surrounding earth. The methods of maintaining face stability and preventing ground movement and subsidence shall be by means of fluid slurry or earth pressure applied to the tunnel face. Alternatively, unstable ground ahead of the jacking face may be stabilized by the injection of suitable chemicals. Methods which require dewatering of the ground will not be accepted, nor will methods which may lead to significant ground loss.

Movement or settlement of structures, railways, utilities and pavement shall be monitored by the Contractor during the micro tunnelling operation and reported to the Engineers and DFCCIL or highway authorities. The contractor shall make provision to install piezometers, settlement plate etc. within railway compounds in his rates for pipe installation if movement or settlement occurs,

especially within the railway compounds, which in the opinion of the Engineers may cause damage, the Contractor shall take immediate action to prevent further movement, settlement or damage. The Contractor shall repair at his risk and cost any damage and restore structure, railway lines and pavement to the satisfaction of the Engineer. In case, any distortion on the track geometry will be noticed on either side up to 50 m from the site of work during the micro tunnelling work, contractor will be responsible to maintain the track geometry up to the required standard of P.Way manual of Indian Railway without paying any extra cost. The contractor shall pay expenses if the owner or concerned agency such as Railway elects to carry out such repairs by themselves.

2.6.10 Setting out

The Contractor shall be deemed to have thoroughly examined the sites, the location of the buried services, available of space for footprint, access to sites and etc. and adjusted the pipeline alignment as deemed necessary and obtained approval of the final pipeline alignment from the Engineer before commencement of the setting out. He shall set out and mark on the ground the proposed pipeline route and the location of the jacking and receiving shaft and the area they occupy for the Engineer's inspection and approval. The Contractor shall be solely responsible for the accuracy of the setting out and any expenses or delays arising from errors made in the setting out shall be borne by the Contractor. Any consequential work or abortive work carried out by the Contractor to rectify the errors shall be entirely borne by the Contractor.

2.6.11 Site layout

The working space at this site is restricted and hence the site layout has to be planned carefully in advance to set-up the equipment and accessories.

2.6.12 Construction of jacking and receiving Shaft

The excavations for Jacking or Receiving Shafts may be used for construction of manholes or valve chambers if required. The Contractor shall submit to the Engineer for approval dimensioned drawings and calculations of the timbering or trench sheeting details for the shafts. Each shaft shall have a separate ladder bay for access which shall be isolated from the part of the shaft used for hoisting material. The shaft trenching shall be watertight and shall prevent any pressurized slurry from the tunnel face reaching the shaft. The shaft shall be kept dry at all times and shall have a drainage sump to pump out the ingress water. The Contractor is deemed to be fully aware of the serious consequences to the tunnelling equipment and other accessories if the shaft is flooded. He shall take every precaution to avoid flooding in the shaft. The shaft shall be well protected against surface runoff getting into the shaft. The contractor shall be solely responsible for any consequential delays and expenditure arising as a result flooding the shaft. The cost of providing thrust driving and receiving pits is inclusive in the rate of micro tunnelling.

The shaft floor shall be designed to withstand the tunnel machine and other accessories.

The Contractor shall be solely responsible for providing and subsequent removal of shoring to the shafts or pits and ensuring stability of the sides of such excavations and safety of adjoining structures.

The sizes of the shafts shall be kept as small as possible considering site constraints. Equipment manufacturer's data on required shaft sizes shall be furnished to the Engineer along with the bid. The sizes of pits shall take due cognizance of available space needed for jacking frame, shoring or feed pumps or other ancillary equipment, thrust wall and entrance ring.

2.6.13 Construction of Thrust wall

Thrust wall shall be designed and constructed by the contractor to the approved details the thrust wall shall be reinforced, or un-reinforced concrete constructed against the wall of the jacking shaft. The Contractor shall ensure that the thrust wall is constructed as an independent structure, and it shall not interfere with the jacking shaft or the floor when jacking force is applied on to it. Contractor shall indicate in his submittals the construction details of the thrust wall showing details on how the wall be made independent of the jacking shaft structure.

The contractor shall ensure that the thrust wall and the soil behind are in complete contact and there is no gap between them. The contractor shall further ensure that the thrust wall shall effectively transfer the jacking force on to the soil behind and that the ground behind is capable of withstanding the jacking force.

In the event that there is gap between the thrust wall and the soil behind, the Contractor shall arrange the gap to be filled with approved cement grout before loading the thrust wall. The cost of providing thrust bed & thrust wall is inclusive in the rate of micro tunnelling.

2.6.14 Installation of Guide Rails

The contractor shall design and fabricate the guide rail/ Jacking frame in accordance with the micro tunnelling equipment manufacture's details and install it firmly onto the floor of the jacking shaft. He shall ensure that the guide rail / Jacking frame is installed to the correct grade, levels and alignment. It shall be also square to the pipeline alignment at all times and not disturbed due to forces arising from the jacking operation. He shall arrange with the Engineer's representative to check the level, alignment etc. of the guide rail and obtain the Engineer's endorsement before commencing guide the pipe jacking work. The cost of providing guide rails is inclusive in the rate of micro tunnelling.

2.6.15 Entrance and Exit Arrangement

One of the most critical micro tunnelling operation is the launching and retrieval (entry and exit) of the micro tunnelling machine. Often this process takes place well below the water table. In those cases, it is critical that the contractor implement adequate engineering measures including stabilization of unstable soil by grouting or other means to prevent soil and water inflows into the shaft.

It is common practice to install a rubber seal at the entry and exit. The seal is to prevent the flow of ground water or lubricant (used for reducing the frictional resistance) through the shield/pipe entry opening on the shaft wall.

An exit ring must be provided without exception if the strata at the level of exit happens to be loose.

The contractor shall plan this work well in advance and fabricate the fittings and rubber seal as per approved method.

2.6.16 Soil stabilization at the Tunnel entry and Exit

In addition to the seal, it may be necessary to stabilize the soil behind the entrance wall. This is to prevent any free flow of unstable soils into the pit when opening is made for the shield to enter into the ground. Chemical grouting, cement grouting, jet grouting, piles, ground freezing or temporary shoring are some methods commonly used by the contractors to prevent the soil flow into the shaft.

2.6.17 Cement Grouting

The Contractor shall be fully responsible for preventing the occurrence of voids outside the pipe and if they occur he shall fill them with cement grout. Immediately following the jacking operation the Contractor shall pressure grout the jacked section to fill all voids existing outside of the pipe. Grouting shall be from the interior of the pipe through grouting holes as specified. The grout mix shall be at least of CM 1:3.

System of standard pipe, fittings, hose, and special grouting outlets embedded in the pipe walls shall be provided by the Contractor. Care shall be taken to ensure that all parts of the system are maintained free from dirt. Grout composed of cement, sand and other approved compound and water shall be forced under pressure into the grouting connections at the invert and shall proceed until grout begins to flow from upper connections. Connections shall then be made to these holes and the operation continued to completion.

Apparatus for mixing and placing grout shall be of a type approved by the Engineer and shall be capable of mixing effectively and stirring the grout and then forcing it into the grout connections in a continuous uninterrupted flow.

After grouting is completed, pressure shall be maintained by means of stop cocks, or other suitable devices until the grout has set sufficiently. After the grout is set, grout holes shall be completely filled with dense concrete and finished neatly without evidence of voids or projection.

2.6.18 Jacking System

The hydraulic jacking system shall be installed against a purpose built thrust wall in the jacking shaft. The substantial force required for jacking pipes and the tunnelling machine shall be provided by high pressure jacks driven by hydraulic power packs. The ram diameter and stroke of the jacks may vary according to individual contractor's techniques and to suite site conditions.

The jacks shall be mounted on specially made frames so that the jacks are square to the pipe alignment. The jacking frame shall be firmly supported to the floor so that it does not move during jacking operation. A push ring shall be used to transmit the jacking force evenly to the pipe.

There are jacking system with multiple strokes or long stroke (3m or 2.43m long), mounted on a specially made jacking frame available to push a full length pipe in a single setting. The system does not require the use of spacers and hence a substantial increase in productivity can be achieved by using multiple stroke jacking system.

2.6.19 Jacking force

The Contractor shall calculate the expected jacking load for each micro tunnel drive well ahead of designing the jacking pipes. Accurate estimation of the jacking load is necessary to determine the pipe wall thickness, the need for intermediate jacking stations and lubrication requirements, types of jacking system and thrust block design. The overall jacking force depends on the type of surrounding soil, depth of cover, pipe materials, diameter and the overall length of the pipeline. The total jacking force essentially consist of two components “Frictional force around the pipeline” and the balancing force at the tunnel face call “Face Pressure”. The Contractor shall use appropriate geo-mechanics formulae and guidelines for computing and jacking force. The contractor shall calculate the anticipated jacking force for each drive and submit his calculation to the Engineer for approval.

The Contractor shall be solely responsible to ensure that the pipes are not subject to excessive jacking force or tortional force so as to crush them. If such thing occurs the contractor shall have to remedy the situation at his risk and cost.

2.6.20 Pipe Lubrication System

The boring machines are commonly designed to overcut about 10mm (in some cases upto 20mm) around the external diameter of pipeline. The pipeline can, in theory be jacked freely through a fluid medium by injecting a clay based (bentonite) or polymer based lubricant into this annulus. In practice, however, fluid losses may occur into the surrounding ground. The contractor shall carefully monitor the jacking force and use appropriate lubrication system, to bring down the jacking force within the allowable jacking force for the pipe.

2.6.21 Programme and Progress Chart

Within one week of the Date of Acceptance of the Bid, the Contractor shall submit a Construction Programme showing the time within which the various significant activities of the work will be executed and completed. External dependencies such as provision of access, drawing approvals and material and equipment supplied by others shall be identified in the programme. The programme shall make due allowance for public holidays etc.

The Construction Programmes shall be in the form of a critical path network set out to a time scale of working days and critical path of the Works as well as the interdependencies of the activities and available float shall be clearly indicated.

The Construction Programme submitted to the Engineer shall be a construction programme under clause of the “General Conditions of Contract for works”. The Contractor shall also supply a soft copy of the work plan in MS Project format to the Engineer.

A section of the overall work plan shall also be displayed at the site offices for each individual site packages and shall be updated every day at the beginning of the office hours.

Any departure from the works procedure as programmed shall first be discussed with and agreed to by the Engineer before implementation.

When required by the Engineer, and/or deemed necessary by the Contractor, an updated Construction Programme shall be prepared by the Contractor to incorporate any changes in the methods, times or sequence of activities, and to show the Contractor’s planned progress towards the Date of practical Completion. The level of detail required for the updated programme shall be as specified for the Construction Programme should the Contractor fail to comply with the provisions of this clause, notwithstanding the provisions of the conditions of the contract, the Engineer may withhold the issue of payment certificate next due and any subsequent payment certificates, until such time as the Contractor complies with the provisions of this clause.

2.6.22 Special Precautions

The Contractor shall carry out the work in such a manner as to cause minimum interference with the railway working.

All workmen working on railway track are required to wear approved retro-reflective vests at all times. The Contractor shall include in his rates for compliance with all the conditions stipulated above.

The Contractor’s rates for tunnelling/drilling shall allow for reinstatement of jacking pit, receiving pit, rescue pit, access pit, trial pits/trenches of any size both within and without the actual pit/trench area disturbed or damaged by the excavation work or movement of heavy construction equipment in vicinity of the site and also for maintenance of foundation and surface areas disturbed or damaged by the tunnelling/drilling activity, whether public or private to the entire satisfaction of the Engineer.

The Contractor shall allow for carrying out this reinstatement work in one or more stages; the maintenance of the reinstatement to the satisfaction of the Engineer; the provision of temporary surfacing maintenance and subsequent breaking out and removal in the event of this being required for the reinstatement of carriageways; reinstating whatever widths shall have been taken out and any additional width the Engineer considers require reinstating due to the Contractor’s operations or to subsidence or traffic; any expenses incurred in carry out the work in short lengths or in stages.

The Contractor shall also allow for the complete reinstatement of all surfaces damaged in side-tables, and all Private or Government's or Corporation's Lands to approval of the Engineer and generally to a condition at least equal to the original ground surface before the Works commenced.

In the event of the Contractor failing to carry out maintenance work and this work being done by others, on the others of the Engineer as set out in the Specification, then the cost so incurred shall be borne by the contractor and deducted from money due or to become due to the Contractor.

The Contractor shall also allow for matching paving in all reinstatement of road surfaces.

The Contractor's rates for tunnelling/drilling shall be deemed to be inclusive of any kind of reinstatement of the affected surface.

2.6.23 Ventilation

The Contractor shall provide adequate ventilation and efficient apparatus to keep all excavations, tunnels and pipelines free from all dangerous gases, whether generated in the soil strata or otherwise, and he shall take precaution to ascertain that they are in a safe condition before allowing his workmen to descend.

While working in existing pipeline or manhole, the Contractor shall provide air blowers to ventilate the place as sewerage gas usually contains a high proportion of hydrogen sulphide, methane and other toxic gasses which in combination with oxygen in explosive. Approved gas monitors/ detectors and oxygen meters shall be used to ensure that the place is free from all dangerous gases. The Contractor is required to appoint a Supervisor/ Safety Officer to ascertain that the pipeline or manhole is in a safe condition before allowing his workmen to descend and work. No smoking or naked flame shall be allowed in the pipeline or manhole. Monitoring of the air quality shall also be carried out regularly by the Contractor's supervisor while work is in progress and work shall be immediately suspended should unsafe conditions develop.

The Contractor is warned that besides performing any work in existing pipeline or manhole, connecting to or breaking into existing pipeline or manhole also poses potentially hazardous conditions. The existing pipeline or manhole to which connection is to be made should therefore be thoroughly ventilated and certified as safe by the Supervisor/Safety officer before workmen are allowed to execute the connection.

The Contractor is warned that besides performing any work in existing pipeline or manhole, connecting to or breaking into existing pipeline or manhole also poses potentially hazardous conditions. The existing pipeline or manhole to which connection is to be made should therefore be thoroughly ventilated and certified as safe by the Supervisory/Safety officer before workmen are allowed to execute the connection.

The Contractor and his Supervisor/ Safety officer shall be solely responsible for safety of persons entering into the pipelines or confined spaces like manholes/pits.

2.6.24 Continuous working

If, in the opinion of the Engineer it is necessary, by reason of the safety of the works, or the restoration of interrupted services or for any other reason whatever, the Contractor shall, when so ordered carry out the works or any portion thereof continuously by day and by night without extra charge and allow for such a contingency in his Bid price.

It shall be clearly and definitely understood by the Contractor that no claims in respect of any of the above shall be allowed in the settlement of the Final Account.

2.6.25 Trail holes

The Engineer may order the Contractor to make trial excavations/ trail bores and to submit a report and/or drawing of the date obtained from each such excavation.

2.6.26 Steel trenching works

Wherever the sub-soil conditions are expected to be of a soft and unstable character, the normal methods of timbering may prove insufficient to prevent subsidence of the adjoining road surfaces, drains and canal and other services or adjoining building and structures, in such circumstances the Contractor will be required to use steel trench sheeting or steel sheet piling adequately supported by timber or steel struts, walling etc.

Steel sheet piles shall conform to the provision of I.S. 2314 or B.S. 4360 and shall be driven where required as directed by the Engineer.

The Contractor will be required to design the layout of the piling and the overall dimensions of the excavation to suit the sheets and corners available and to give sufficient working space for the proper construction of the work.

The Contractor will be expected to supply, pitch, drive and subsequently remove trench sheeting or piling in accordance with other items of the Specification and the terms “timber” or “timbering” shall also apply to steel trench sheeting or steel sheet piling throughout. The Contractors shall be solely responsible for design of any shoring or timbering or sheeting system and their adequacy and safety. The rates quoted by the Contractors shall be inclusive of such measures of providing steel sheeting or sheet piling.

Please note that any shoring steel/sheet pile or wooden to the jacking and receiving shafts shall be deemed to have been covered under the item of micro tunnelling.

2.6.27 Supply and delivery of pipes

The Contractor is required to schedule his own requisition for pipes and he shall ensure consistency in the delivery of the pipes as demanded by the work schedule.

Any delay in the delivery of pipes which affect the progress of the work shall be solely the responsibility of the Contractor.

2.6.28 Co-operation with other contractors

Where there are other contractors employed by the Employer or any other agency working in the same area, the Contractor must programme/ plan his works to be contained within his working space to avoid any interference to and by the other contractors, and shall schedule the work in co-ordination with them. No claim on account of this clause will be entertained by the Corporation and his prices are to include for such contingency.

2.6.29 Interaction/Liaison with utility personnel

The contractor shall note that it is the responsibility of the Contractor to co-ordinate and arrange meetings with Utility Companies or the Government or Municipal Departments and obtain necessary permissions or get the utilities diverted. The DFCCIL would arrange to give authority letters to the Contractor for arranging such meetings. The Engineer's representative may be present in such meetings. The DFCCIL is not contractually bound to accept what transpired in any meetings or discussions in which the Engineer or the DFCCIL was not represented.

2.6.30 Hydraulic testing of pipeline & Handing over of completed works

Upon completion of works the pipes shall be hydraulically tested as per the required pressure. After successful testing, the contractors must clean the site as per the satisfaction of the Engineer and the same shall be handed over by the contractor to the user department under proper acknowledgement and certificate to this effect.

Hydraulic testing and cleaning up the site on completion is to be done by the contractors at his own cost and no extra payment shall be admissible for this requirement.

PART II
Chapter-7
OTHER CONDITIONS

2.7.1 Existing Services

The Contractor shall carry out complete survey of buried services in vicinity of the work sites and which are likely to be affected by the works. The Contractor shall take all due care and necessary precautionary measures to ensure that no damage occurs to any existing pipeline, water or gas mains, electricity or telephone cables, culverts and any other existing services. The Contractor shall be solely responsible for safety of buried services. Any damage arising out of the Contractor's work in such respect will be met with entirely by the Contractor at his risk and cost and no claim to the contrary will be entertained by the Corporation.

2.7.2 Change in Pipeline Alignment

The Engineer reserves the right to change the centre lines of pipelines, as proposed in the drawings, to any suitable position at his discretion to overcome obstruction and unsuitable ground conditions. No extra claim will be entertained by the DFCCIL on account of the above contingency except for any additional increase in length of the lines and the Contractor must allow for this contingency in his rates. Such changes shall be made before commencement of micro tunnelling work at the site and the contractor shall be notified of such change at least 3 days prior to setting out for the work.

2.7.3 Working space

(a) The contractor shall note that adjoining the existing pipelines other services may have already been laid and his attention is particularly drawn to his responsibility for precise identification and maintenance of the same during the course of construction. The contractor may use additional work area if permitted by the traffic police/railways or PWD or other concerned authorities or private owners of adjoining properties.

(b) The sites for constructing manholes/shafts will be made available to the Contractor up to the possible extents only, where possible, of the contract site plan. The Contractor will, however, be required to maintain and protect existing structures, roads, services, trees etc. unless directed to demolish or remove such structures etc.

(c) Any additional working space required by the Contractor will be entirely the Contractor's responsibility and he will be required to obtain all necessary consents, pay all the costs arising out of compensation, etc. and reinstate the land affected to the satisfaction of the owner and the Engineer.

2.7.4 Safeguarding properties adjacent to Site

(a) Where work is undertaken near or adjacent to buildings and in the opinion of the Engineer, the stability of such building is liable to be affected as a result of the work, he shall arrange to

have such buildings inspected and to have record of any cracks or any other defects which may be affected by the work. Every precaution should be taken by the Contractor to safeguard such building or structure and they should be to the complete satisfaction of the Engineer. The Contractor may be directed by the Engineer to excavate in such lengths of excavation as will permit the least amount to be opened at one time in order to minimize the danger of such open excavation affecting the stability of buildings or their support. Such inspections shall be carried out before commencement of work and the inspection report shall be jointly signed by the contractor and the engineer.

(b) The contractor will be held responsible for damage to public, private or other buildings and properties adjacent to the site of the works which is caused as a director or indirect result of the

Contractor's work. Should the Contractor fail to take the necessary precautions the Engineer may carry out such work as may be necessary at Contractor's risk and cost.

(c) The Contractor must take due care to identify and safeguard all existing services, such as water, sewer or gas mains, electricity and telephone cables and ducts, sufficient in advance of the Works. The Contractor shall notify the Engineer of any mains, pipes or conduits met which in trail pits or excavation and shall take steps to support and protect these to the satisfaction of the Engineer. The Contractor will be responsible for any damage done to mains, cables, culverts and other services, inside or outside the excavations as a result of earth movement, faulty timbering, excessive weight of excavated material being deposited too close to open trench or shaft, leaving the excavation open for an unduly long period or to any form of settlement following backfilling.

(d) No work done by the Engineer or his workmen nor the fact that the timbering has complied with this Specification or requirements of the Engineer nor the approval of proposed or completed timbering etc, by the Engineer shall absolve the Contractor from his responsibilities and he will be required to make good and damaged caused at his risk and cost.

(e) Furthermore, the Contractor is required to comply with any other safety and fire regulations that may be introduced from time to time.

2.7.5 Method of working

The Contractor is required to carry out the Works in the manner detailed herein, shown on the drawings and normally adopted. He is at liberty to supply with his Bid such modification as he proposes for consideration and shall seek approval from the Engineer before he is allowed to apply new or changed methods of construction. For this reason the bidder shall submit his method statement giving full particulars of various aspects as given below:-

a) Equipment proposed to be used giving dia. Of equipment, maximum torque and jacking force, bentonite arrangement, cutter disk arrangement and types, rock cutting ability, slurry circuit particulars, weight of equipment upsizing implications etc.

b) Availability of the number of micro tunnelling equipment in his possession which can be brought to the work site within three weeks of issue of work order/acceptance letter. Please note

that if the bidder is unable to assure availability of at one MTMs onsite within four weeks of issue of the acceptance letter his bid shall be liable to be rejected.

- c) Method of sequentially transferring the connections to newly laid line giving approximate duration of activities and
- d) Methods for shaft construction, supply
- e) Rescue methods / remedial measures
- f) Access roads / arrangements

Notwithstanding any Specification, approval of decision given by the Engineer as to the carrying out of the Work, the Contractor will be wholly liable for the safety of the works, both temporary and permanent and for the completion of the Contract to the satisfaction of the Engineer.

2.7.6 Water tightness

All water retaining structures must be absolutely watertight showing no leakage or dampness through any concrete or joint. Any leakage or dampness evident on completion of the work must be remedied by an approved method at the Contractors expenses.

2.7.7 Prevention of floatation

(a) The Contractor's warned that the structures may not be heavy enough to resist the possible uplift due to water pressure until the structure, soil cover and backfilling have been completed. The Contractor shall make adequate arrangements to keep the excavation dry until the structure and filling are complete or shall adopt other approved means of ensuring the stability of the temporary or permanent works. His proposed method must be submitted to the Engineer for approval before work is commenced and he shall provide for adequate standby plant and attendance throughout 24 hours each day.

(b) For pipelines laid in wet, waterlogged or ground subject to flooding all necessary precaution must be taken to prevent the flotation or movement of pipelines whether laying laid or under test.

2.7.8 Inspection and Replacement of Defective Work

(a) At any time during or after the execution of the Works the Contractor shall, at the request of the Engineer and within such time as the Engineer shall name, open for inspection any work covered up and should the Contractor refuse or neglect to comply with such request, he shall employ other workmen to open up same.

(b) If the laid work has been covered up in contravention of the Engineer's instructions, or if on being opened up it be found not in accordance with the Drawings, Specification and Bills of Quantities or the instructions of the Engineer, the expenses of such opening and covering it up again, whether done by the Contractor or such other workmen, will be borne by and is recoverable from the Contractor.

(c) Wherever in the opinion of the Engineer the work done is adequate or of poor workmanship or inferior materials or in any way sub-standard such works will be demolished, cut out and removed from the Works immediately and replaced with new materials of the required standard and quality at the Contractor's risk and cost.

2.7.9 CCTV Survey

After completion of particular drive / work or as directed by the Engineer, Contractor at his own cost shall carry out CC TV Survey including submission of two soft copies and two hard copies to the Engineer. No extra payment shall be admissible for this requirement.

2.7.10 Protocol of each Drive

After completion of particular drive / work or as directed by the Engineer, Contractor shall submit within five days a proper and authentic 'PROTOCOL' (both soft and hard copy) of Micro tunneling machinery for the particular drive / work to the Engineer. Protocol must reflect date time, length, various pressures of main jacks / steering jacks, deviations in vertical and horizontal alignment etc. No extra payment shall be admissible for his requirement.

(If contractor fails to submit the data as per No. 2.6.26, 2.6.27, 2.6.28 above, Engineer may deduct from the RA Bill of the work, an amount up to 3% of the cost of micro tunnelling and pipe jacking, for that particular drive/ work).

PART-II

Chapter-8

GENERAL GUIDELINES REGARDING SPECIFICATIONS AND SPECIAL CONDITIONS FOR SUPPLY OF CEMENT FOR CONSTRUCTION WORKS

2.8 GENERAL GUIDELINES REGARDING SPECIFICATIONS AND SPECIAL CONDITIONS FOR SUPPLY OF CEMENT FOR CONSTRUCTION WORKS

2.8.1 SUPPLY OF CEMENT:

2.8.1.1 Deleted

2.8.1.2 The cement required for various items of work under Schedule shall be supplied by the Contractor at the site of work in accordance with the requirements and specifications.

2.8.1.3 For supply and use of cement in various works, relevant IRS codes and IS Specifications will be applicable. Wherever, relevant specifications are not available, decision of the Engineer shall be final and binding on the contractor.

2.8.2 SPECIFICATIONS FOR CEMENT:

2.8.2.1 The specifications for cement are:

- (i) Ordinary Portland Cement conforming to IS: 269: 2015 (33, 43 and 53 Grade)
- (ii) Rapid Hardening Portland Cement conforming to IS: 8041
- (iii) Hydrophobic Portland Cement conforming to IS: 8043

2.8.3 SOURCE AND PACKAGING:

2.8.3.1 Cement to be used on the works shall be procured from the main / reputed cement plants or from their authorized dealers. Decision of DFCCIL regarding reputed firms shall be final and binding on the contractor.

2.8.3.2 Cement shall be packed in jute sacking bags conforming to IS: 2580-1995, double hessian bituminised (CRI type) or woven HDPE conforming to IS:11652-2017, woven polypropylene conforming to IS: 11653:1986, Jute synthetic union conforming to IS: 12174:1987 or any other approved composite bags, bearing the following information in legible markings:

1. Manufacturer's name or Registered Trade Mark of manufacturer, if any.
2. Grade of cement

3. Type of cement
4. Weight of each bag in Kg.
5. Date of manufacture,
6. IS Code No. to which the cement conforms.

2.8.3.3 All cement bags shall have company stitches intact and if any sign of tampering with company stitches is noticed, the same will be rejected without any test and no compensation shall be payable in this regard.

2.8.4 TEST CERTIFICATE REGARDING QUALITY OF CEMENT:

2.8.4.1 Necessary test certificates will have to be produced by the contractor regarding the quality of the cement conforming to the specification in addition to the manufacturer's certificates.

2.8.4.2 DFCCIL reserves the right to take samples during the course of the work and get the cement tested in reputed laboratories to ascertain the conformity to the specification. Cost of such testing shall be borne by the contractor without any extra payment.

2.8.4.3 Tests on cement shall be done as per relevant IS Codes. These tests are as follows:

1. Compressive strength
2. Initial and final setting time
3. Consistency
4. Soundness.
5. Fineness

2.8.4.4 The Contractor shall arrange to carryout above tests for every 100 Tonnes of cement and for every change in lot/batch and the same shall be submitted to the DFCCIL and take approval of the DFCCIL before using in work. No extra payment will be made for conducting such tests.

2.8.4.5 Any temporary structure required for storage of cement, has to be provided by the tenderer at his cost and shall be removed after completion of work. The DFCCIL will only provide suitable land wherever land is available and is free for use. On completion of the work or as directed by the Engineer, the shed if put up by the Contractor, should be removed by the contractor and site cleared at his cost.

2.8.5 CONSUMPTION OF CEMENT:

2.8.5.1 The cement consumption for other than design mix concrete, shall be as per Indian Railways Unified Standard Specifications, 2021 and for approved design mix concrete, the quantity of cement will be decided based on the approved design mix keeping in mind Minimum and Maximum cement content specified for various grades. Excess cement used

will not be paid for and the decision of the Engineer in this connection shall be final and binding on the Contractor.

2.8.6 Deleted

2.8.7 GENERAL

2.8.7.1 No wastage of any of the materials supplied and used in the work by the contractor including cement is payable by DFCCIL, contractor shall make his own arrangements for storing cement for use in work.

2.8.7.2 Contractor should take proper precautionary measures to store the cement in good condition against rains, etc. Storage of cement at the work site shall be at the contractor's expense and risk. Any damage occurring to cement due to faulty storage in contractor's shed or on account of negligence on his part shall be the liability of the contractor.

2.8.7.3 53 Grade/43 Grade of cement should be stacked separately in countable manner.

2.8.7.4 Admixture as per IS: 9103 of approved manufacturer by the Engineer shall be permitted to be used in concrete wherever required. However, no extra payment for the admixtures used shall be payable unless otherwise specified in the Schedule.

2.8.7.5 Cement for temporary and enabling works shall be arranged by the contractor at his own cost and no extra payment will be paid on this account.

2.8.7.6 Empty Cement bags on release from the work is the property of the Contractor and shall be disposed off by the Contractor himself.

PART - II**Chapter 9****GENERAL GUIDELINES REGARDING SPECIFICATIONS AND SPECIAL CONDITIONS FOR CONCRETE WORKS****2.9 GENERAL GUIDELINES REGARDING SPECIFICATIONS AND SPECIAL CONDITIONS FOR CONCRETE WORKS****2.9.1 Specifications:-**

2.9.1.1 Concrete for PCC, RCC (Including piling and RCC deck slab) shall be as per relevant Indian Railways Unified Standard Specifications, 2021, Indian Railways Standards (IRS) and IS Specifications. Some important guide lines are listed below. Along with these, all other relevant IRS, IRC and IS specifications with their up to date versions shall also govern. These govern all concrete works in bridges, etc. as applicable.

- (i) IRS Concrete Bridge Code.
- (ii) IS 456 : Code of Practice for Plain and Reinforced Concrete.
- (iii) Relevant Indian Railways Unified Standard Specifications (Formation Works, Bridge Works and P. Way Works), Engineering Department - 2021
- (iv) Relevant IRS/IRC/IS Specifications/Codes

2.9.1.2 Specifications for cement, steel, GI binding wire, used in concrete construction shall be as per IRS/IRC/IS specifications. Any other specifications/rules/guidelines issued from time to time by Railway Board/RDSO shall also govern the works.

2.9.1.3 In all matters of execution, including testing of various components, where the above codes/specifications/guidelines are not clear or explicit or at variance, the directions given by the Engineer shall be final and binding on the contractor.

2.9.2 Cement:

2.9.2.1 The cement used in concrete construction shall be minimum 43 Grade Ordinary Portland Cement as per the design and as specified in the relevant schedules. Specifications for cement are covered under the supply schedule.

2.9.3 Reinforcement:-

2.9.3.1 All Reinforcement Steel (TMT Bars of Grade Fe 500D/550D) shall be procured as per specification mentioned in IS: 1786:2008 with latest Amendments. Independent tests shall be conducted, wherever required, to ensure that the materials procured conform to the Specifications.

These steel shall be procured only from those firms, which are Established, Reliable, Indigenous & Primary Producers of Steel, having Integrated Steel Plants (ISP), using iron ore as the basic raw material and having in – house iron rolling facilities, followed by production of liquid steel and crude steel, as per Ministry of Steel’s guidelines.

- 2.9.3.2 Bars shall be cut, bent and placed correctly and accurately to the size and shape as shown in the detailed drawing. Preferably bars of full length shall be used. The reinforcement shall be tied with annealed steel binding wire. Overlapping of bars, where necessary, shall be done as directed by Engineer. Rates quoted include the cost of annealed steel binding wire of appropriate specifications. Rate also include necessary cutting and straightening is also included.
- 2.9.3.3 Welding of reinforcement will not be generally permitted except in special circumstances under the written approval of the Engineer.
- 2.9.3.4 A register shall be maintained by the Contractor with full details of reinforcement provided for accountal and payment of steel reinforcement. The contractor should sign a similar such register maintained by DFCCIL before undertaking concreting works, as a token of acceptance of the details of reinforcement steel provided in works, failing which the details as recorded by DFCCIL shall be binding on the contractor for the purpose of payment and no dispute will be entertained by DFCCIL on this account.
- 2.9.3.5 Contractor shall remove from site any steel materials rejected by the Engineer within a reasonable time as specified by him.
- 2.9.3.6 Protective Coatings:- In order to offer adequate resistance against corrosion, reinforcement bars may be provided with suitable protective coatings depending upon the environmental conditions In aggressive environments (severe, and extreme) application of cement slurry coating after removal of rust and other loose material from the surface of the reinforcement bar will generally be sufficient. The environmental condition for this work is ‘MODERATE’
- 2.9.3.7 The steel consumption shall be as per the drawings issued by the DFCCIL. Quantity of steel reinforcement consumption shall be as per reinforcement actually utilized in the work based on approved bar bending schedule. Nothing extra will be paid for wastage or for cut rods, if any, which will be property of the contractor. The weight of the steel will be calculated from the nominal weight given in the relevant standard.
- 2.9.4 **Coarse & Fine Aggregates:-**
- 2.9.4.1 Aggregates shall comply with the requirements of IS: 383 and shall be subjected to the tests in accordance with IS: 2386. Coarse aggregates shall be from crushed stone from approved quarries. Sand shall be from good river sources of approved quarries only.
- 2.9.4.2 The size of the coarse aggregates shall be as per relevant IRS / IS specifications.
- 2.9.4.3 The size of the fine aggregates shall be as per relevant IRS / IS specifications.

- 2.9.4.4 Coarse aggregate shall be crushed and roughly cubical in shape. Fine aggregate shall be naturally produced. Creek/ Marine sand shall not be used in permanent works.
- 2.9.4.5 The grading of the sand shall conform to relevant IS specification. The sand shall be screened on a 4.75 mm size screen to eliminate over size particles. The sand, if required, shall be washed in screw type mechanical washers in potable water to remove excess silt, clay and chlorides wherever required. The screening and washing of sand shall be completed at least one day before using it in concrete. The washed sand shall be stored on a sloping platform and in such a manner as to avoid contamination.
- 2.9.5 **Water:**
- 2.9.5.1 Water used for washing of aggregates and for mixing and curing concrete shall be clean, potable and free from injurious amounts of oils, acids, alkalis, salts, sugar, organic materials or other substances that may be deleterious to concrete or steel and shall conform to clause 5.4 of IS : 456.
- 2.9.5.2 In case of doubt regarding development of strength, the suitability of water for making concrete shall be ascertained by the compressive strength as per IS : 4031 (Part VI) and initial setting time tests IS : 4031 (Part V).
- 2.9.5.3 Water found satisfactory for mixing is also suitable for curing concrete. However, water used for curing should not produce any objectionable stain or unsightly deposit on the concrete surface. The presence of tannic acid or iron compounds is objectionable.
- 2.9.6 **Admixtures:-**
- 2.9.6.1 In bridges, use of admixtures is governed by clause 4.4 of IRS Concrete Bridge Code.
- 2.9.6.2 The admixtures, when permitted, shall conform to IS: 9103. Calcium chloride or admixtures containing calcium chloride shall not be used in structural concrete containing reinforcement, prestressing tendon or other embedded metal. The admixture containing Cl⁻ & SO₃ ions shall not be used. Admixtures containing nitrates shall also not be used. Admixtures based on thiocyanate may promote corrosion and therefore shall be prohibited.
- 2.9.6.3 Concrete admixtures shall be obtained only from established manufactures with proven track record or as per approved list wherever available.
- 2.9.6.4 The contractor shall provide the following information concerning each admixture after obtaining the same from the manufacturer before the same is put to use:
- (a) The chemical names of the main ingredients in the admixtures.
 - (b) The chloride iron content, if any, expressed as a percentage by mass of the total admixture.

- (c) Values of dry material content, ash content and relative density of the liquid admixture which can be used for Uniformity Tests.
- (d) Whether or not the admixture leads to the entrainment of air when used as per the manufacturer's recommended dosage, and if so to what extent.
- (e) Where two or more admixtures are proposed to be used in any one mix, confirmation as to their compatibility.
- (f) There would be no increase in risk of corrosion of the reinforcement or other embodiments as a result of using the admixture.
- (g) Retardation achieved in initial setting time.
- (h) Normal dosage and detrimental effects, if any, of under dosage and over dosage.
- (i) Recommended dosages and expected results, including proof for the same wherever required. Independent test results shall be produced by the contractor on demand/as specified.

2.9.7 Storage of materials:-

2.9.7.1 Storage of materials shall be as per IS: 4082. All materials may be stored at proper places so as to prevent their deterioration or intrusion by foreign matter and to ensure their satisfactory quality and fitness for the work. The storage space must also permit easy inspection, removal and restoring of the materials. All such materials even though stored in approved godowns / places, must be subjected to acceptance test prior to their immediate use.

2.9.7.2 Aggregate shall be stored at site on a hard and dry level patch of ground. If such a surface is not available, a platform of planks or of corrugated iron sheets, or a floor of dry bricks, or a thin layer of lean concrete shall be made so as to prevent the admixture of clay, dust, vegetable and other foreign matter.

Stacks of fine and coarse aggregate shall be kept in separate stack piles, sufficiently removed from each other to prevent the materials at the edge of the piles getting intermixed. On a large job it is desirable to construct dividing walls to give each type of aggregate its own compartment. Fine aggregate shall be stacked in place where loss due to the effect of wind is minimum.

Unless specified otherwise or necessitated by site conditions, stacking of aggregate should be carried out in regular sizes.

2.9.7.3 Cement shall be transported, handled and stored at the site in such a manner as to avoid deterioration or contamination. Cement shall be stored above ground level in perfectly dry and water-tight sheds and shall be stacked not more than eight bags high. Wherever bulk storage containers are used their capacity should be sufficient to cater to the requirement

at site and should be cleaned at least once every 3 months. Cement older than 3 months from the date of manufacture shall not be used. Each consignment shall be stored separately so that it may be readily identified and inspected and cement shall be used in the sequence in which it is delivered at site. Any consignment or part of a consignment of cement which had deteriorated in any way, during storage, shall not be used in the works and shall be removed from the site by the Contractor without charge to DFCCIL.

2.9.7.4 The reinforcement bars, when delivered on the job, shall be stored above the surface of the ground level by at least by 150mm and shall ordinarily be stored in such a way as to avoid distortion and to prevent deterioration and corrosion. Every bar shall be inspected before assembling on the works and any defective, brittle, excessively rusted or burnt bars shall be removed. Cracked ends of bars shall be cut out.

2.9.8 Testing of cement & others:-

Cement and other items shall be tested as per specifications. However, the contractor shall also arrange for additional tests at his own cost as required by the Engineer as and when required. The decision of the Engineer shall be final in this regard.

2.9.9 Concreting:

2.9.9.1 The contractor shall make his own arrangements for supply of water and electricity for all his works at his own cost. He shall arrange potable quality water for use in all concrete works and samples of water shall be got tested from approved laboratory/approved by the Engineer before being used in concreting. Apart from water, fine & coarse aggregates and all other materials shall be tested from time to time by the contractor at his cost to ensure proper quality works.

2.9.9.2 Maximum / minimum size of aggregates, standards of quality of materials, minimum cover for concrete, use of admixtures / chemicals, treatment to reinforcement / finished surfaces, etc., shall be as per relevant Codes, IS / IRS specifications and conditions of contract as specified.

2.9.9.3 All exposed concrete surfaces shall be finished smooth by the contractor at his own cost. Shuttering materials for RCC in substructure and superstructure shall be strictly of steel only to permit vigorous vibration and to ensure no deviation of finished dimensions by more than +5/-0 mm and wooden shutters are not permitted. For other works also, proper quality of shuttering materials which will permit vibrating and will not require additional finishing shall only be used. If there is any variation in the surface, alignment or lines in the products beyond permissible rejection limits indicated in these conditions, the DFCCIL reserves the right to reject the same and the contractor shall not have any claim in this regard and cost of DFCCIL materials involved will be recovered from the contractor including penalties, if any imposed.

- 2.9.10 Weigh batching, vibrating, curing & testing by Batching plant with computerized control:
- 2.9.10.1 All concrete shall be machine batched, machine mixed and machine vibrated, by using appropriate vibrators. Weigh batching plant, mixers, vibrators, etc., of appropriate capacity, as specified/directed by the Engineer, shall be arranged by the contractor at his cost. In this case, Weigh batching plants shall have computerized control for weighing, loading, mixing and delivery.
- 2.9.10.2 Batching plants, transit mixers, concrete pumps, etc., shall be installed by the contractor necessarily at site. In case of failure of any of the above, standby arrangements for ensuing continuous concreting has to be provided by the contractor at his cost. For piling works concreting shall be done continuously as per the volumes designed without break and accordingly standby arrangements shall be ensured by the contractor.
- 2.9.10.3 Curing & vibrating shall be arranged by the contractor at all locations/heights at his own cost and no extra payment on this account will be admissible. Curing of concrete shall be done as per relevant IS Codes / Specifications. If curing is not done by the contractor properly, DFCCIL may get it done through any other means at the Contractor's cost without any notice to him and recover from his bills the same including penalty if any at the discretion of the Engineer. The concrete shall be kept wet constantly by ponding or covered with a layer of sacking canvas etc.
- 2.9.10.4 Test cubes shall be cast at regular intervals and tested to ascertain the strength of concrete. The contractor shall establish a cube testing facility along with operator at the site or nearby area to facilitate prompt testing of concrete. Test cube moulds as required as per IS Codes shall be made available by the contractor at his cost.
- 2.9.11 Design Mix Concrete:**
- (a) General: Design Mix is mandatory for grades higher than M20. For concrete of compressive strength greater than M55, specialized literature should be consulted. Admixtures may be used while designing. Only design mix shall be used for all items of concrete. Prior to the start of construction, the contractor shall submit details of each trial mix of each grade of concrete to the Engineer for approval. When the proportions of the mix are approved, the contractor shall not vary any of the design parameters or the source of the materials without the approval of the Engineer. Wherever there is a significant change in materials used, fresh trial mix shall be arranged by the contractor as required by the Engineer. The concrete shall be designed keeping in view the minimum cement content and maximum cement content. Minimum cement content

depends upon the environmental exposure conditions but maximum Cement Content shall be as per IS:456:2000 for Plain & Reinforced Concrete and as per para 2.2.13.3 of this chapter for Pre-stressed concrete.

- (b) **Mix Design and Proportioning:** Recommended guidelines for Concrete Mix Design are given in IS: 10262 which may be referred to for details. As mentioned therein in order that not more than the specified proportion of test results is likely to fall below the characteristic strength, the concrete mix has to be designed for a somewhat higher target average compressive strength. In terms of clause 9.2.2 of IS: 456, the Target Mean Strength of Concrete mix should be equal to the characteristic strength plus 1.65 times the Standard Deviation. Mix proportion shall be designed to ensure that the workability of fresh concrete is suitable for conditions of handling and placing, so that after compaction it surrounds all reinforcement and completely fill the form work. When concrete is hardened, it shall have the stipulated strength, durability and im- permeability.

Determination of the proportions of by weight of cement, aggregate and water shall be based on design mix.

As a trial the manufacturer of concrete may prepare a preliminary mix according to provisions of SP : 23-1982. (Special Publications 23-1982 of Bureau of Indian Standards) Mix design shall be tried and the mix proportions checked on the basis of tests conducted at a recognized laboratory approved by the Engineer. All concrete proportions for various grades of concrete shall be designed separately and mix proportions established keeping in view the workability for various structural elements, methods of placing and compacting.

Max size of Aggregate, Target Mean Strength			
Grade of Concrete	Max size of Aggregate (mm)	Characteristic Strength (fck) at 28 days (N/mm²)	Target Mean Strength (fck) 28 days (N/mm²)
M20	20	20	26.60
M25	20	25	31.60
M30	20	30	38.25
M35	20	35	43.25
M40	20	40	48.25
M45	20	45	53.25

- (c) **Standard deviation:** Standard deviation calculations of test results based on tests conducted on the same mix design for particular grade designation shall be done in accordance with Clause 9.2.4 of IS 456. Table 8 of IS 456 gives the standard deviation that can be assumed for design of mix in the first instance. The final standard deviation figures may be determined based on test results for the particular grade of concrete when available.
- (d) **Approval of Design Mix:** The contractor shall submit details of each trial mix of each grade of concrete designed for various workability conditions to the Engineer for his comments and approval. Concrete of any particular design mix and grade shall be produced / manufactured for works only on obtaining written approval of the Engineer.
- 2.9.12 **Requirements of Consistency:-** The mix shall have the consistency which will allow proper placement and consolidation in the required position. Every attempt shall be made to obtain uniform consistency. The optimum consistency for various types of structures shall be as indicated in table below or as directed by the Engineer.

Slump Required for workability		
	Type	Slump (mm)
1	(a) Structures with exposed inclined surface requiring low slump concrete to allow proper compaction	25
	(b) Plain Cement Concrete	25
2	RCC structures with widely spaced reinforcements; e.g. solid columns, piers, abutments, footings, well steining	40-50
3	RCC structures with fair degree of congestion of reinforcement, e.g. pier and abutment caps, box culverts well curb, well cap, walls with thickness greater than 300mm	50-75
4	RCC and PSC structures with highly congested reinforcements e.g. deck slabgirders, box girders, walls with thickness less than 300mm	75-125
5	Underwater concreting through tremie e.g. bottom plug, cast-in-situ piling	100-200

The minimum slump of concrete in case of bored cast in situ pile shall be 150 to 200 mm.

- 2.9.13 **Durability:-** The durability of concrete depends on its resistance to deterioration & environment in which it is placed. The resistance of concrete to weathering, chemical attack, abrasion, frost and fire depends largely upon its quality and constituent materials. Susceptibility to corrosion of the steel is governed by the cover provided and the permeability of concrete. The cube crushing strength alone is not a reliable guide to the

quality and durability of concrete; it must also have adequate cement content and a low water-cement ratio. The general environment to which the concrete will be exposed during its working life is classified into three levels of severity that is moderate, severe, and extreme as described below:

Environment	Exposure condition
MODERATE	Concrete surface protected against weather or aggressive conditions. Concrete surface sheltered from severe rain or freezing whilst wet. Concrete exposed to condensation. Concrete structure continuously under water. Concrete in contact with non aggressive soil /ground water.
SEVERE	Concrete surface exposed to severe rain, alternate wetting & drying or occasional freezing or severe condensation. Concrete exposed to aggressive subsoil / ground water or coastal environment.
EXTREME	Concrete surface exposed to sea water spray, corrosive fumes or severe freezing conditions whilst wet. Concrete structure surfaces exposed to abrasive action, surfaces of members in tidal zone. All other exposure conditions which are adverse to exposure conditions covered above.

Maximum water-cement ratio, grade of concrete and cementitious material content for various environment conditions for achieving durability are indicated below for guidance:

2.9.13.1 Maximum Water Cement Ratio:-

The limits for maximum water cement ratio for design mix shall be based on environmental conditions as defined in durability clause. The limits for maximum water cement ratio for different environmental conditions shall be as given in Table below:

Environment	Maximum Water-Cement Ratio		
	Plain Concrete (PCC)	Reinforced Concrete (RCC)	Prestressed Concrete (PSC)
Moderate	0.50	0.45	0.40
Severe	0.45	0.40	0.40
Extreme	0.40	0.35	0.35

2.9.13.2 Grade of Concrete:-From durability consideration, depending upon the environment to which the structure is likely to be exposed during its service life, minimum grade of concrete shall be as given in table below:

Minimum Grade of Concrete

1. For Bridges in Prestressed Concrete and important Bridges.

Structural member	Moderate exposure	Severe Exposure	Extreme exposure
PCC member	M-25	M-30	M-35
RCC member	M-30	M-35	M-40
PSC member	M-35	M-40	M-45

2. For Bridges other than mentioned above and sub-structure

Structural member	Moderate exposure	Severe Exposure	Extreme exposure
PCC Member	M-15	M-20	M-25
RCC member	M-20	M-25	M-30

2.9.13.3: Cementitious Material Content:-

Maximum Cementitious Material Content shall be limited to 500kg/m³. Depending upon the environment to which the structure is likely to be exposed during its service life, minimum Cementitious Material Content in concrete shall be as given in table below:

Minimum Cementitious Material Content			
Environment	Minimum Cementitious Material Content in Kg/cum		
Exposure Condition	Plain Cement Concrete (PCC)	Reinforced Cement Concrete (RCC)	Pre-stressed Cement Concrete (PSC)
	Content	Content	Content
Moderate	240	300	400
Severe	250	350	430
Extreme	300	400	440

2.9.13.4 Clear cover is the least distance from outer most surface of steel or binding wire or its end to the face of concrete. It is also a dimension used in design and indicated on the drawings. From durability consideration, minimum clear cover shall be as under.

Minimum Covers			
Type of structure	Extreme Environment	Severe Environment	Moderate Environment
Slab	50	35	25
Beam/Girder	60	50	35
Column	75	75	50
Piles	75	75	50

- 2.9.14 Permeability of concrete: Permeability requirements are as specified in IRS Concrete Bridge Code. Permeability test shall be mandatory for all RCC bridges under severe and extreme environment. Under moderate environment, permeability test shall be mandatory for all major bridges and for other bridges and structures.
- 2.9.15 **Mixing of concrete:**
- 2.9.15.1 Concrete shall be mixed either in a mini mobile batching plant or in a batching and mixing plant as per the specifications. Hand mixing shall not be permitted. The mixer or the plant shall be at an approved location considering the properties of the mixes and the transportation arrangements available with the Contractor. The mixer or the plant shall be approved by the Engineer.
- 2.9.15.2 Mixing shall be continued till materials are uniformly distributed and a uniform colour of the entire mass is obtained, and each individual particle of the coarse aggregate shows complete coating of mortar containing its proportionate amount of cement.
- 2.9.15.3 Mixers which have been out of use for more than 30 minutes shall be thoroughly cleaned before putting in a new batch. The first batch of concrete from the mixer shall contain only two thirds of the normal quantity of coarse aggregate. Mixing plant shall be thoroughly cleaned before changing from one type of mix to another.
- 2.9.16 **Transporting, Placing and Compaction of Concrete:**
- 2.9.16.1 The method of transporting and placing concrete shall be approved by the Engineer. Concrete shall be transported and placed as near as practicable to its final position, so that no contamination, segregation or loss of its constituent materials takes place. Concrete shall not be freely dropped into place from a height exceeding 1.5 metres.
- 2.9.16.2 When concrete is conveyed by chute, the plant shall be of such size and design as to ensure practically continuous flow. Slope of the chute shall be so adjusted that the concrete flows without the use of excessive quantity of water and without any segregation of its ingredients. The delivery end of the chute shall be as close as possible to the point of deposit. The chute shall be thoroughly flushed with water before and after each working period and the water used for this purpose shall be discharged outside the formwork.
- 2.9.16.3 All formwork and reinforcement contained in it shall be cleaned and made free from standing water, dust, immediately before placing of concrete.
- 2.9.16.4 No concrete shall be placed in any part of the structure until approval of the Engineer has been obtained.
- 2.9.16.5 If concreting is not started within 24 hours of the approval being given, it shall have to be obtained again from the Engineer. Concreting then shall proceed continuously over the

area between the construction joints. Fresh concrete shall not be placed against concrete which has been in position for more than 30 minutes unless a proper construction joint is formed.

- 2.9.16.6 Except where otherwise agreed to by the Engineer, concrete shall be deposited in horizontal layers to a compacted depth of not more than 450 mm when internal vibrators are used and not exceeding 300 mm in all other cases.
- 2.9.17 Concrete when deposited shall have a temperature of not less than 50 C and not more than 40°C. It shall be compacted in its final position within 30 minutes of its discharge from the mixer, unless carried in properly designed agitators, operating continuously. It may be necessary to add retarding admixtures to concrete if trials shows that the period indicated above are unacceptable. In all such matters, engineer's decision shall be final.
- 2.9.18 Concrete shall be thoroughly compacted by vibration or other means approved by Engineer, during placing and worked around the reinforcement, embedded fixtures and into corners of the formwork to produce a dense homogenous void-free mass having the required surface finish. When vibrators are used, vibration shall be done continuously during the placing of each batch of concrete until the expulsion of air has practically ceased and in a manner that does not promote segregation. Over vibration shall be avoided to minimize the risk of forming a weak surface layer. When external vibrators are used, the design of formwork and disposition of vibrator shall be such as to ensure efficient compaction and to avoid surface blemishes. Vibrators shall not be applied through reinforcement and where vibrators of immersion type are used, contact with reinforcement and all inserts like ducts etc., shall be avoided. The internal vibrators shall be inserted in an orderly manner and the distance between insertions should be about one and half times the radius of the area visibly affected by vibration. Additional vibrators in serviceable condition shall be kept at site so that they can be used in the event of breakdowns.
- 2.9.19 Mechanical vibrators used shall be of appropriate specifications, type and capacity and as directed by the Engineer.
- 2.9.20 Equipment and machinery for concreting:
- 2.9.20.1 For concrete works, the following equipment in numbers indicated are considered necessary for efficient and speedier concreting at each site. However, the actual numbers may be arranged as required by the Engineer, taking into account the site conditions.

Indicative List of Equipment and Machinery		
1.	Concrete Batching plant (15 to 30 cum/hr capacity)	01 No.
2.	Transit Mixers (4 to 7 cum capacity)	3 Nos.
3.	Concrete Vibrators (2 HP capacity)	4 Nos.
4.	Vibrators of Needles (60mm & 40mm)	4 Nos.
5.	Screed vibrator	2 Nos.

6.	Form vibrator (500 watts capacity)	2 Nos.
7.	Generator (35 KV capacity)	1 No.
8.	Welding set (3 to 5 KV capacity)	2 No.
9.	Reinforcement Steel Cutting Machine	2 No.
10.	Reinforcement Steel Bending Machine	2 No.
11.	Concrete Pumps (10 to 20 HP capacity with 40m pipe length)	1 No.
12.	Hydra 12.0 T capacity crane	1 No.
13.	Concrete Funnel Bucket	1 No.
14.	Air compressor (100 to 150 cum capacity)	1 No.
15.	Concrete Dumpers	2 Nos.
16.	Any other including power lifts etc., as required to suit site	Adequate No.

2.9.20.2 All the machinery are required to be arranged by the contractor at his own cost and the agreement rates for concreting include the same. No extra payment is admissible for any machinery arranged by the contractor.

2.9.21 TRANSPORTATION OF CONCRETE & PUMPING OF CONCRETE

2.9.21.1 General

Fresh concrete can be transported to the placement area by a variety of methods. Common among them are:

- Mixer trucks
- Stationary truck bodies with or without agitators.
- Buckets hauled by trucks.
- Conveyor belts.
- Hose or pipe line by pumping.

Each type of transportation has specific advantages and limitations depending on the condition of use, mix, accessibility and location of placing.

2.9.21.2 Transportation by Mixer Trucks

2.9.21.2.1 These are essentially revolving drums mounted on truck chassis. Truck mixers used in the job shall be labelled permanently to indicate the manufacturer's specifications for mixing like:-

- Capacity of drum.
- Total number of drum revolutions for complete mixing.
- Mixing speed

- Maximum time limit before completion of discharge and after cement has entered the drum.
- Reduction in time period of discharge due to warm weather or other variables.

All above information shall only form guidelines for the manufacturer/producer of concrete.

- 2.9.21.2.2 Fulfilment of the stipulated number of revolutions or elapsed time shall not be the acceptable criterion. As long as the mixing water limit is not exceeded and the concrete has satisfactory plastic physical properties and is of satisfactory consistency and homogeneity for satisfactory placement and consolidation and is without initial set, the concrete shall be acceptable.
- 2.9.21.2.3 When the concrete is totally mixed in transporting trucks volume of concrete being transported shall not exceed 63% of the rated capacity of the drum. In case the concrete is totally mixed in the central batching plant, the transporting truck may be loaded up to 80% of the rated capacity of the drum. In this case the drum shall be rotated at charging speed during loading and reduced to agitating speed after loading is complete.
- 2.9.21.2.4 When transporting concrete by truck mixers, delivery time shall be restricted to 90 minutes or initial setting time whichever is less from the time cement has entered the mixer to completion of discharge.
- 2.9.21.3 Transporting by Agitating / Non-agitating Trucks.
- 2.9.21.3.1 Transporting ready mix concrete by this method shall consist of truck chassis mounted with open top bodies. The metal body shall be smooth and streamlined for easy discharge. Discharge may be from the rear when the body is mechanically tilted. Body of the truck shall have a provision of discharge gate. Mechanical vibrators shall be installed at the discharge gate for control of discharge flow.
- 2.9.21.3.2 Agitators, if mounted, also aid in the discharging of concrete from the truck in addition to keeping the concrete alive.
- 2.9.21.3.3 Water shall not be added to concrete in transport through this system.
- 2.9.21.3.4 Bodies of trucks shall be provided with protective covers during period of inclement weather.
- 2.9.21.3.5 Delivery period, when adopting this system of transporting concrete shall be restricted to 30 minutes from the moment all ingredients including cement and water enter in mixer to completion of discharge.
- 2.9.21.4 Transporting by Buckets

This method of transportation is very common for transportation of centrally mixed concrete. Buckets of suitable capacities may be filled with concrete which is totally mixed in central plant and hauled to the job site. Buckets then may be conveyed to the actual point of placement either with the help of crane/hoist or they may be carted.

As in the case of open truck transportation, extra water shall not be added to concrete transported in buckets. Concrete shall be protected from inclement weather by necessary covering arrangements. Also, maximum delivery period for this system of transportation from the time cement is introduced into the mixer to completion of discharge shall not exceed 30 minutes.

2.9.21.5 Cleaning

Before loading concrete in either truck mixer, open bodied trucks or buckets, the containers shall be thoroughly cleaned, washed and dried, so that there is no water or moisture in the container which may affect the designed water content of the concrete.

2.9.21.6 Other Methods of Transportation

Transportation of concrete either by belt conveyors or by pumping is envisaged in some works.

If, the producer/manufacturer/purchaser/contractor of ready mix concrete desires to use such methods of transportation, they may do so provided their scheme and complete specifications are submitted to the Engineer for his record and approval.

2.9.21.7 Objective

Method of transportation used shall ensure:-

- Efficient delivery of concrete
- No significant alteration of properties with regard to water cement ratio, slump, air content and homogeneity.
- All variables in transportation, considering type and accessibility of placement locations, distance, time interval etc., shall be carefully studied before arriving at the method used.

2.9.21.8 Pumpable Concrete (Extracted from Para 8.9 of Concrete Bridge Code, 1997)

General- Pumpable concrete is the concrete which is conveyed by pressure through either rigid pipe or flexible hose and discharged directly into the desired area. It is especially used where space for construction equipment is very limited.

Pumping Rate and Range – Depending on the equipment, pumping rate should be 10 to 70 cum. per hour. Effective pumping range is upto 300m horizontally and 90m vertically.

- (i) Proportioning Pumpable Concrete
1. **Basic Consideration** - More emphasis on quality control is essential to the proportioning and use of a dependable pump mix. Concrete mixes for pumping must be plastic. Particular attention must be given to the mortar and to the amounts and sizes of coarse aggregates.
 2. The maximum size of angular coarse aggregate is limited to one-third of smallest inside diameter of the hose or pipe. Provisions should be made for elimination of oversized particles in the concrete by finish screening or by careful selection of aggregates.
- (ii) Pumping Concrete
- a) Proper planning of concrete supply, pump locations, line layout, placing sequences and the entire pumping operation will result in saving of cost and time. The pump should be placed as near the placing area as practicable and the entire surrounding area must have adequate bearing strength. Lines from the pump to the placing area should be laid out with a minimum of bends. The pipe line shall be rigidly supported.
 - b) While pumping downward 15m or more, it is desirable to provide an air release valve at the middle of the top bend to prevent vacuum or air build up. When pumping upward, it is desirable to have a valve near the pump to prevent reverse flow.

2.9.22 Construction Joints:-

- 2.9.22.1 Construction joints shall be avoided as far as possible and in no case the locations of such joints shall be changed or increased from those shown on the drawings, except with express approval of the Engineer. The joints shall be provided in a direction perpendicular to the member axis. Sequencing of concrete placement should be organized in such a way that cold joints are totally eliminated. The sequence of concreting shall be submitted for approval of Engineer prior to concreting of the structural element. Concreting shall be carried out continuously up to the construction joints, the position and arrangement of which shall be predetermined by the designer.
- 2.9.22.2 Construction joints should be positioned to minimize the effect of the discontinuity on the durability, structural integrity and appearance of the structure. Joints should be located away from regions of maximum stress caused by loading particularly where shear and bond stresses are high.
- 2.9.22.3 Laitance, both on the horizontal and vertical surfaces of the concrete, should be removed before fresh concrete is cast. The surface should be roughened to promote good adhesion. Various methods for removal can be used but they should not dislodge the coarse aggregate particles. Concrete may be brushed with a stiff brush soon after casting while the concrete is still fresh and while it has only slightly stiffened. If the concrete has partially hardened, it may be treated by wire brushing or with a high pressure water jet,

followed by drying with an air jet, immediately before the new concrete is placed. Fully hardened concrete should be treated with mechanical hand tools or grit blasting, taking care not to split or crack aggregate particles.

- 2.9.22.4 Where there is likely to be a delay before placing the next concrete lift, protruding reinforcement should be protected. Before the next lift is placed, rust loose mortar, or other contamination should be removed from the bars and where conditions are particularly aggressive and there has been a substantial delay between lifts, the concrete should be cut back to expose the bars for a length of about 50 mm to ensure that contaminated concrete is removed.
- 2.9.22.5 In all cases, when construction joints are made, it should be ensured that the joint surface is not contaminated with release agents, dust, or curing membrane and that the reinforcement is fixed firmly in position at the correct cover.
- 2.9.22.6 When the formwork is fixed for the next lift, it should be inspected to ensure that no leakage can occur from the fresh concrete. It is a good practice to fix a 6 mm thick sponge which seals the gap completely. The practice of first placing a layer of mortar or grout is not recommended. The old surface should be soaked with water without leaving puddles, immediately before starting concreting; then the new concrete should be thoroughly compacted against it. When fresh concrete is cast against existing mature concrete or masonry the older surfaces should be thoroughly cleaned and soaked to prevent the absorption of water from the new concrete. Standing water should be removed shortly before the new concrete is placed and the new concrete should be thoroughly vibrated in the region of the joint.
- 2.9.23 Finishing of concrete: The finished surface of concrete after removal of formwork shall be such that no touching up is required. All fins/holes caused by form joints, supports, rods etc., shall be ground/filled up effectively using appropriate machinery shutters, formwork etc., used in construction shall be as specified in the conditions and the labour used shall be skilled to suit the quality requirements of the work. Any surface, finished poorly in the opinion of the Engineer shall require repair/remedial measures at the cost of the contractor and the Engineer's decision in this regard shall be final. Any structure, which has deficiencies in finishing including product parameters beyond the rejection limits, as specified in these conditions, are liable to be rejected and the decision of the Engineer shall be final in this regard.
- 2.9.24 Coatings for concrete: Normally finished concrete structures do not require any surface protective coatings in non aggressive environment (moderate) for all structures. For aggressive environment (severe and extreme conditions), Epoxy phenolic IPN coating or CECRI Integrated four coat system can be used in superstructure of bridges and coal tar epoxy coating for sub structure of bridges (in affected part only).

2.9.25 Shuttering, Formwork & False work:-

2.9.25.1 Shuttering, Formwork & False work shall be designed to meet the requirements of the permanent structure, taking into account the actual conditions of materials, environment and site conditions. Careful attention shall be paid to the detailing of connections and functions. All the materials used for shuttering, formwork & falsework shall conform to the specified quality consistent with the intended purpose and actual site condition as applicable. All shuttering, form work, falsework, etc., shall be got approved by the Engineer before it is put into use.

2.9.25.2 Forms shall not be struck until the concrete has reached strength at least twice the stress to which the concrete may be subjected at the time of removal of formwork or as approved by the Engineer. In normal circumstances and where Ordinary Portland Cement is used, forms may generally be removed after the expiry of the following periods:-

Stripping Time	
a) Walls, columns and vertical faces of all structural members	24 to 48 hours as may be decided by the Engineer
b) Slabs (props left under)	3 days
c) Beam soffits (props left under)	7 days
d) Removal of props under slabs	
1) Spanning up to 4.5 m	7 days
2) Spanning over 4.5 m	14 days
e) Removal of props under beams	
1) Spanning up to 6 m	14 days
2) Spanning over 6 m	21 days

Where the shape of the element is such that the formwork has re-entrant angles, the formwork shall be removed as soon as possible after the concrete has set, to avoid shrinkage crack occurring due to the restraint imposed.

2.9.26 Defective Concrete and Measurement of concrete:

2.9.26.1 Should any concrete be found honeycombed or in any way defective which may be, at the discretion of the Engineer suspected to affect the performance of the structure, shall be rejected outright. Contractor shall have no claim in this regard and the decision of the Engineer shall be final. The member, structurally independent, in which the concrete is found to be defective, shall be replaced by the contractor at his cost fully. The damages arising on account of such defective concreting shall also be recoverable from the dues of

the contractor, including penalties if any. DFCCIL reserves the right to get the member replaced by any means at the cost of the contractor at any cost if the contractor delays reproduction.

2.9.26.2 However, some surface defects, not affecting the structural properties shall, on the instruction of the Engineer, be repaired as per the approved procedures. The complete cost of such repairs shall be borne by the contractor and no compensation shall be payable. Records of such repairs done shall be maintained by the contractor.

2.9.26.3 The tolerances for finished concrete bridge structures shall be governed by relevant IS Code and relevant IS Code shall be followed; deviations beyond the permissible limits are liable to be rejected.

2.9.27 Sampling and Strength Testing of Concrete:

2.9.27.1 General: Samples from fresh concrete shall be taken as per IS: 1199 (method of sampling and analysis of concrete). Concrete for making 3 test cubes shall be taken from a batch of concrete at point of delivery into construction according to procedure laid down in IS: 1199 and 150 mm cubes shall be made, cured and tested at the age of 28 days for compressive strength in accordance with IS:516. The 28 days test strength result for each cube shall form an item of sample.

Concrete shall conform to the surface finish and tolerance as prescribed in Unified specifications. Random sampling and lot by lot of acceptance / inspection shall be made for the 28 days cube strength of concrete.

Concrete under acceptance shall be notionally divided into lots for the purpose of sampling, before commencement of work. The delimitation of lots shall be determined by the following:

- (i) No individual lot shall be more than 30 cum in volume.
- (ii) At least one cube forming an item of the sample representing the lot shall be taken from concrete of the same grade and mix proportions cast on any day.
- (iii) Different grades of mixes of concrete shall be divided into separate lots.
- (iv) Concrete of a lot shall be used in the same identifiable component of the bridge.

2.9.27.2 Sampling:

2.9.27.2.1 Frequency of Sampling

Sampling procedure: A random sampling procedure shall be adopted to ensure that each concrete batches forming the lot under acceptance / inspection shall have a reasonable

chance of being tested that is, sampling should be spread over the entire period of concreting and cover all mixing units.

Frequency: The minimum frequency of sampling of concrete of each grade shall be in accordance with table below. At least one sample shall be taken from each shift of work.

Minimum Frequency of Sample	
Quantity of concrete in work, (M ³)	No. of samples
1-5	1
6-15	2
16-30	3
31-50	4
51 and above	4 plus one additional sample for each additional 50 M ³ or partthereof

2.9.27.2.2 Test Specimen: Three test specimens shall be made from each sample for testing at 28 days. Additional samples may be required for various purposes such as to determine the strength of concrete at 7 days or at the time of striking the formwork, or to determine the duration of curing, or to check the testing error. Additional samples may also be required for testing samples cured by accelerated methods as described in IS: 9013. The specimen shall be tested as described in IS: 516.

2.9.28 Test Results of Sample: The test results of the sample shall be the average of the strength of 3 specimens. The individual variation should not be more than + 15 percent of average. If more, test results of the sample are invalid.

2.9.29 Acceptance Criteria of Concrete: Acceptance criteria shall be acceptance of concrete as per Indian Railways Unified Standard Specifications, 2010 / IRS Concrete Bridge Code/ Relevant IS Code. The 28 days compressive strength shall be the criterion for acceptance or rejection of the concrete.

The followings shall also be strictly followed:

- (i) Whenever a mix is redesigned due to a change in the quality of aggregate or cement or for any other reason, it shall be considered a new mix and initially subject to the acceptability criteria above.
- (ii) If the concrete produced at site does not satisfy the above strength requirements, the Engineer shall reserve the right to require the contractor to improve the

methods of batching, the quality of the ingredients and redesign the mix with increased cement content, if necessary. The Contractor shall not be entitled to claim any extra cost for the extra cement used for the modifications stipulated by the Engineer for fulfilling the strength requirement specified.

- (iii) It is the complete responsibility of the contractor to redesign the concrete mixes by approved standard methods and to produce the reinforced concrete conforming to the specification and the strength requirements approved by the Engineer. It is expected that the Contractor will have competent staff to carry out this work.

2.9.30 Setting of field laboratory by the Contractor:

2.9.30.1 For all works, the Contractor shall set up a field laboratory of his own for testing of cement/water/concrete at work site, which should be open for use and inspection by the DFCCIL officials at any time and carryout the tests with his own equipments, gauges, machinery, consumables and operators, at his own cost. The laboratory shall be equipped with necessary equipment to carry out various tests such as property tests, sieve analysis, setting time of cement, compression tests on cubes, slump test, workability test etc., on aggregate, cement, water and concrete required for ensuring the required quality. For steel however, test reports of reputed institutes/laboratories are acceptable.

2.9.30.2 The cost of setting up the laboratory, equipping the same, maintaining conducting all tests on materials and cubes shall be borne by the contractor, within his quoted rates for works and no extra payment is eligible for the same.

2.9.30.3 All gauges, machines, equipments and other measuring and testing equipments of the laboratory shall be got checked / calibrated regularly and the necessary certificates furnished to the Engineer by the Contractor.

2.9.30.4 All the equipments, machinery etc., shall be kept in good working condition. Contractor shall also maintain the required qualified / experienced staff at the laboratory.

2.9.30.5 The following is the minimum laboratory facilities at the site which are to be provided and operated by the contractor at his cost.

- (i) Testing of fine and coarse aggregates as per IS:383 and IS:2386.
- (ii) Testing of cement concrete as per IS: 8142 and IS:516.
- (iii) Testing of water as per IS: 456 and IS: 3025.
- (iv) Certain non-routine testing such as (a) Testing of admixtures, (b) Chemical testing of fine and coarse aggregates (c) Permeability of concrete (permeability test on concrete shall be got done when the mix design is approved / changed of the

reputed laboratories as approved by Engineer). The frequency and need for these tests shall be decided by the Engineer, based on stipulations contained in conditions of contract or on the basis of accepted Engineering practice (e.g. whenever source of admixture is changed, tests stipulated in the codes will have to be carried out afresh, etc).

2.9.30.6 At frequently, as the Engineer may require, testing shall be carried out in the field for:

- (a) Moisture content and absorption and density of sand and aggregate.
- (b) Silt content of sand.
- (c) Grading of sand and aggregates.
- (d) Slump test of concrete.
- (e) Concrete cube test.
- (f) Permeability test for concrete
- (g) Density of Plasticizer.
- (h) PH Value of water

PART - II**Chapter 10****GENERAL GUIDLINES REGARDING SPECIFICATIONS AND SPECIAL CONDITIONS FOR SUPPLY OF REINFORCEMENT AND STRUCTURAL STEEL****2.10 GENERAL GUIDLINES AND SPECIFICATIONS FOR SUPPLY OF REINFORCEMENT AND STRUCTURAL STEEL****2.10.1 SUPPLY OF STEEL FOR VARIOUS WORKS:**

Supply of steel to various specifications as required under various schedules in the contract are governed by the Technical specifications and Special Conditions specified hereunder.

All steel shall be supplied by the Contractor at the site of work and stacked, stored, protected and maintained by him at his cost till they are put into use. Any temporary structure required for storage of steel etc., has to be provided by the Contractor at his cost and should be removed after completion of the work. The DFCCIL will only provide suitable land for construction of the above temporary shed free of cost wherever available.

For supply and use of steel in various works, relevant IRS Codes Specifications, IS Specifications and Railways specifications will be applicable.

2.10.2 SPECIFICATIONS FOR STEEL:

2.10.2.1 The steel supplied by the contractor must satisfy any of the following material specifications as required for the work along with other concerned specifications.

(i) The reinforcement steel shall be Thermo mechanical Treated (TMT) bars of grade Fe 500D/Fe550D conforming / satisfying to IS 1786:2008 (Upto date).

(ii) The structural steel shall be conforming to IS 2062 (Upto date) as specified. It shall have Sub quality 'B0' & Grade E250 (Fe 410)/or Grade E350(Fe490) as mentioned in the tender schedule and the requirements of IRS B1-2001 shall be fulfilled for all components for all spans.

(iii) Relevant other IS and IRS Specifications with regard to properties, testing and use of the above steel items also shall govern.

2.10.2.2 The contractor shall produce the manufacturers test certificate for each lot of supply satisfying the requirements of relevant IS specifications and at the specific frequency as laid down.

- 2.10.2.3 The Contractor shall arrange to carryout additional tests on physical properties of steel for every 50 metric tonne (MT) of steel and for every change in lot / batch for reinforcement steel and structural steel at his cost. No extra payment will be made for conducting such tests and the agreemental rate is inclusive of above testing charges.

2.10.3 PROCUREMENT OF STEEL:

- 2.10.3.1 All Reinforcement steel (TMT bars) and Structural Steel shall be procured as per specification mentioned in BIS's documents – IS: 1786 and IS: 2062.

Independent tests shall be conducted, wherever required, to ensure that the materials procured conform to the Specifications.

These steel shall be procured only from those firms, which are Established, Reliable, Indigenous & Primary Producers of Steel, having Integrated Steel Plants (ISP), using iron ore as the basic raw material and having in-house iron rolling facilities, followed by production of liquid steel and crude steel, as per Ministry of Steel's (Government of India) guidelines.

However, only certain isolated sections of structural steel, not being rolled by ISPs, can be procured from the authorized re-rollers of ISPs or authorized licensee of BIS having traceability system and who use billets produced by ISPs with the approval of Engineer.

- 2.10.3.2 The contractor shall have to submit the cash memo and challans along with the lot / batch of steel purchased in token of proof of purchase of steel from reputed dealers. Steel shall be approved by Engineer only after production of necessary certificates before use in works.

2.10.4 REINFORCEMENT AND STRUCTURAL STEEL:

- 2.10.4.1 Payment for supply of all types of steel shall be made for the quantity required / used as per the drawings issued from time to time. No payment will be admissible for quantity supplied in excess of the required quantity as per drawings. However, contractor will be permitted to take the excess quantity back by his own means, but no claim for payment for transportation so involved will be admissible. No payment will be made for more supply of steel at the site / excess used in Construction. No payment will be made for steel used in temporary or enabling works unless explicitly provided for in the Schedules. Steel for enabling/temporary works shall be arranged by the Contractor at his own cost.

2.10.5 STAGE PAYMENTS FOR STRUCTURAL STEEL:

- 2.10.5.1 No Advance Payment shall be made. However, stage payment for manufacturer of steel girders shall be made as per Bills of Quantities by the DFCCIL for steel physically brought to site by the contractor.
- 2.10.5.2 Stage payment for steel will be released subject to the following conditions:

- (i) The steel shall be delivered at site and properly stored under covered sheds in measurable stacks and separately maintained for various sizes, sections and dates of supply.
- (ii) The quantities of steel shall be brought to the site only in such instalments that would facilitate smooth progress of work and consumed in reasonable time.
- (iii) Proper account in the Steel Register is to be maintained in the prescribed format at the site for the receipt and use of the steel.
- (iv) Ownership of such steel shall be deemed to vest with the DFCCIL.
- (v) Before releasing the stage payment, the contractor shall insure the steel at his own cost in favour of DFCCIL against theft, misuse, damages, fire etc.
- (vi) The price variation claim for steel will continue to be governed as per extant PV clause and with reference to delivery at site.
- (vii) The Stage payment will be made, only when the Engineer or his authorized representative certifies that the said quantity of steel is received at site and entered in the register and that in his opinion the steel is actually required in accordance with the contract.
- (viii) If fabrication is done at the Contractor's workshop/factory premises, the stage payment as prescribed in tender schedule shall be released subject to submission of Indemnity Bond of equivalent amount.
- (ix) No Stage payment is permitted for steel required for temporary and enabling works.

2.10.5.3 Any Stage payment found to be made against the materials brought to the site in excess over the actual materials consumed in work shall be recovered from the contractor dues.

2.10.6 OTHERS:

2.10.6.1 Reinforcement steel and structural steel shall be stored in such a way so as to avoid distortion and to prevent deterioration by corrosion. All steel used should be free from loose Mill scale, loose rust, paints and oil covering / coating etc.

2.10.6.2 Steel material, for which stage payment has been availed by the Contractor, shall be property of DFCCIL and will be issued to contractor by Engineer whenever required for the work. Contractor will be solely responsible for guarding against theft / misuse of the consignment due to any cause what so ever. The stage payment will be made, only when the Engineer certifies that in his opinion that the materials are actually required in accordance with the contract. It is the responsibility of the agency to ensure that steel as per the requirement is brought to site as per approved drawings / requirements.

2.10.6.3 The contractor shall be bound to store the materials at site of work earmarked for the purpose by the Engineer and shall not remove from the site nor use for any other purposes than exclusively for execution of the work for which the materials are intended for.

Safeguarding of the materials is the responsibility of the contractor even if the material is deemed to be owned by the DFCCIL and insurance etc., have been arranged by the contractor.

- 2.10.6.4 Contractor shall remove from site any steel materials rejected by the Engineer within reasonable time as specified by him.
- 2.10.6.5 Before the test pieces are selected, the Contractor shall furnish copies of the mill records of the reinforcement steel giving number of coils in each cast with sizes and identity marks to enable identification of the material with the bill produced.

ADDITIONAL TECHNICAL SPECIFICATION

Part III
Chapter I
Additional Technical Specification (General)
including Safety Circular/ Instructions

1.1 Precautions While Working In Close Proximity Of Existing Indian Railway Track

I. General: Any construction activity involving the existing embankment/formation/ running track of the Indian Railways shall be carried out only with the prior specific authorization of the Engineer.

a. Plying of Vehicles in Close Proximity of tracks

b. The contractor shall not allow any road vehicle belonging to him or his suppliers etc. to ply in railway land next to the running line. If for execution of certain works viz concreting work, earth work for New railway line and supply of ballast for new or existing rail line, etc, road vehicles are necessary to be used in railway land next to the railway line, the contractor shall apply to the Engineer for permission giving the type & no. of individual vehicles, names & license particulars of the drivers, location, duration & timings for such work / movement. The Railways/Railways/ Engineer or his authorized representative will personally counsel, examine & certify, the road vehicle drivers, contractor's flag men & supervisor and will give written permission giving names of road vehicle drivers, contractor's flag men and supervisor to be deployed on the work, location, period and timing of the work. This permission will be subject to the following obligatory conditions:

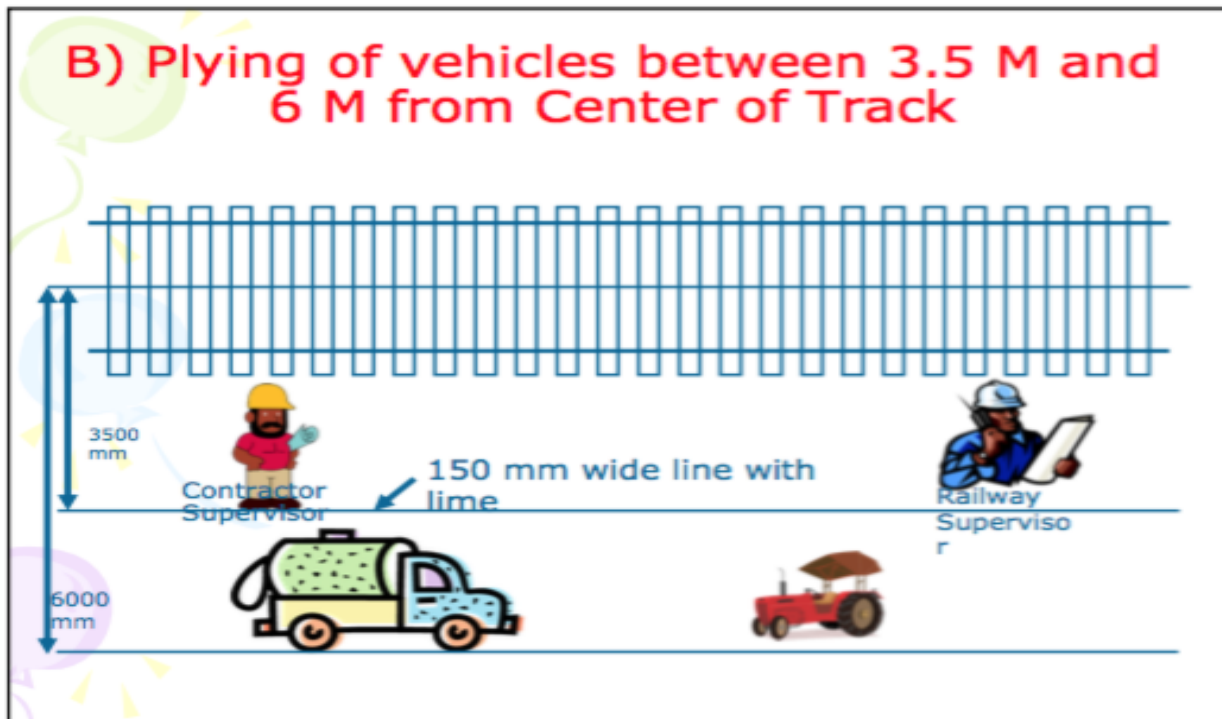
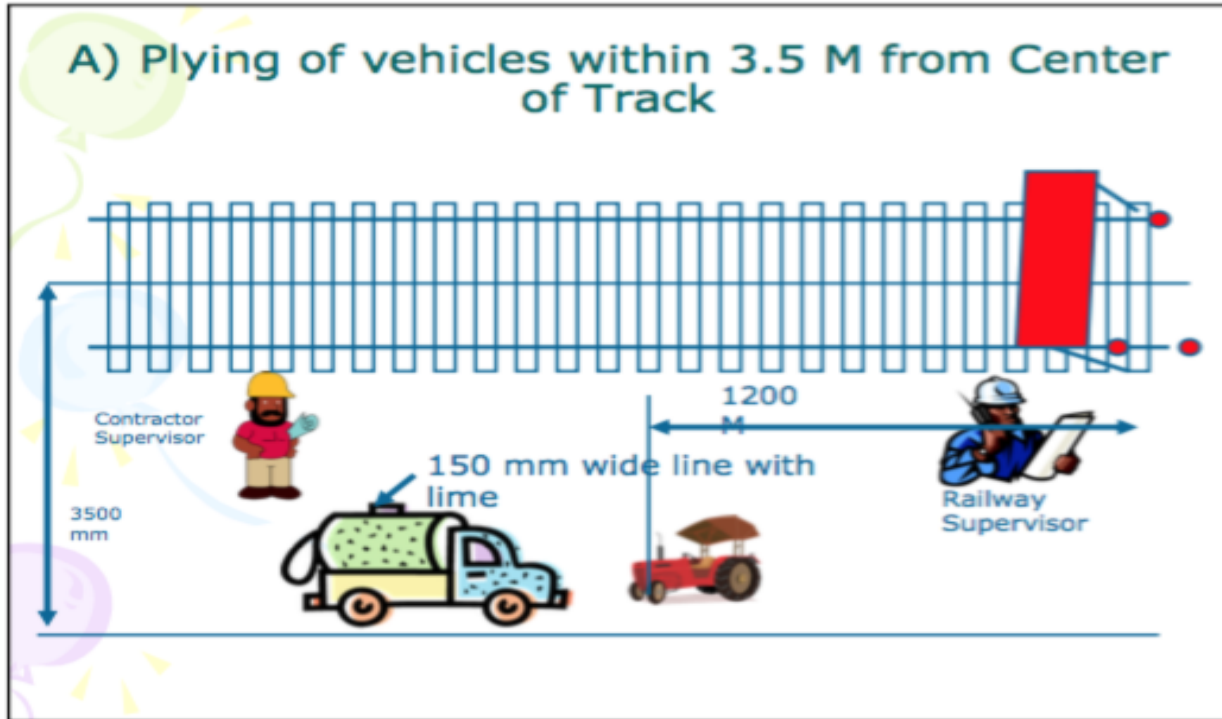
- i.** Road vehicles can ply along the track after suitable cordoning of track with minimum distance of 6 meters from the centre of the nearest track. For working of machinery close to the running tracks or plying of road vehicles during night hours, the contractor shall apply to the Engineer in writing for permission, duly indicating the site details in a neat sketch and safety measures proposed to be taken. Subject to the approval of concerned Railway authorities, the Engineer or his authorized representative will communicate permission to the contractor / contractor's representative. The contractor and his men shall strictly adhere to the instructions given along with such permissions.
- ii.** Nominated vehicles and drivers shall be utilized for work in the presence of at least one flag man and one supervisor certified for such work. In order to monitor the activities during night hours, additional staff may have to be posted based on the need of the individual site.
- iii.** The Contractor' machinery, equipment and vehicles shall normally operate 6 m clear of track. Any movement / work at less than 6m and upto a minimum of 3.5m clear of track centre, shall be carried out only in the presence of a person (including any railway employee) authorized by the Engineer. No part of the road vehicle shall be allowed at less than 3.5m from track centre.
- iv.** The Contractor's machinery and equipment like Cranes, Flash Butt Welders, Ballasting machinery, Compactors, Track Laying Systems etc., are required to operate close to the existing line carrying traffic. Contractor is fully responsible for operating these machinery without endangering the safety of the running line and traffic.

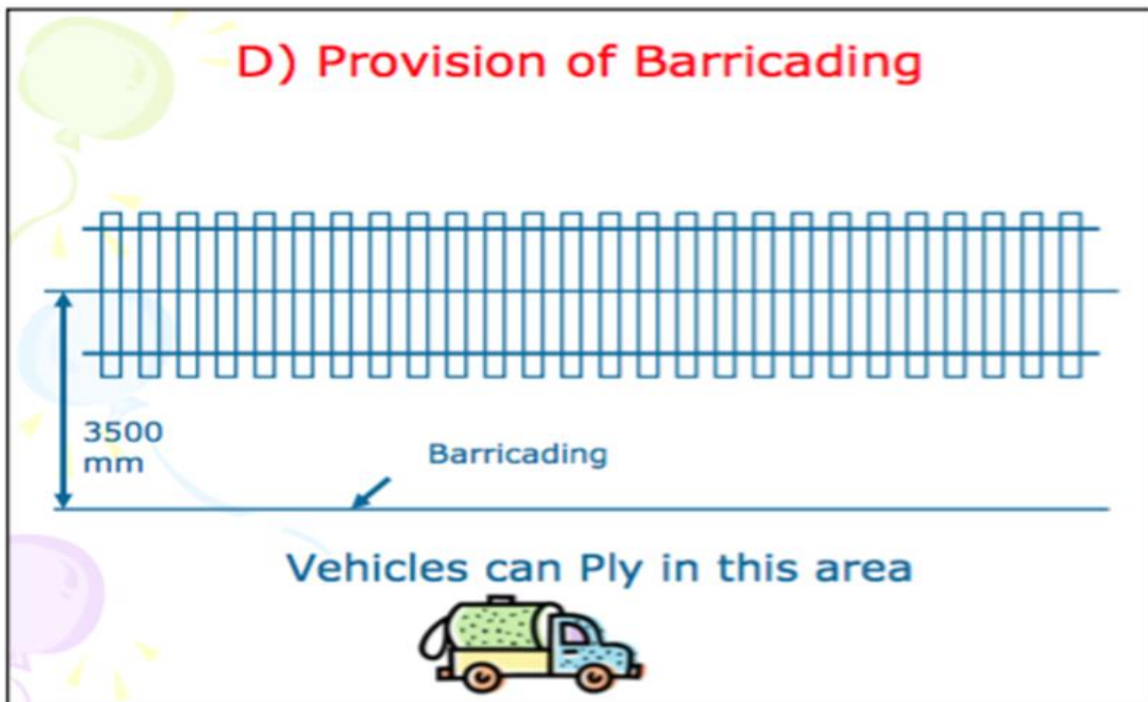
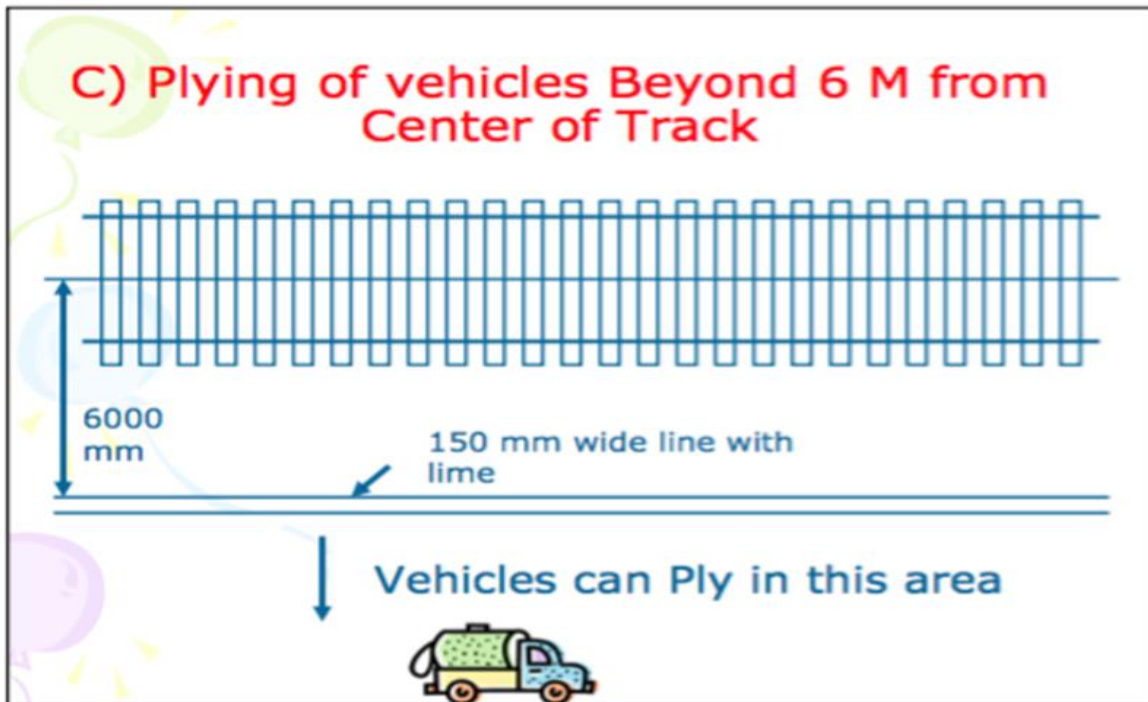
II. Works being executed outside running lines are further divided into following 3 sub groups depending upon their distance from the IR track:-

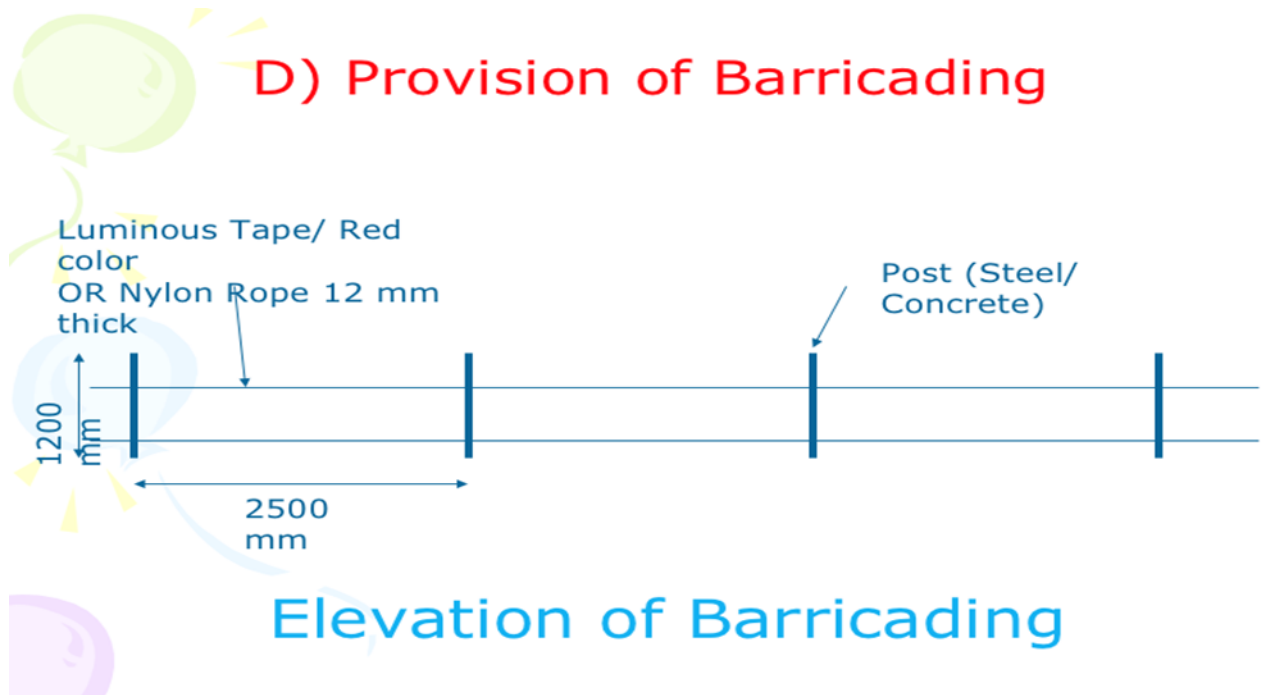
- a.** works being done within 3.5 meters from centre of track.
- b.** works being done between 3.5 meters and 6 meters from centre of track
- c.** works being done beyond 6 meters from centre of track

If a work site is located far away from the existing track but the vehicles in connection with the work are required to ply within the distance from centre of track as mentioned above, it will be construed that the work is being executed under above classification.

- III. Works being done within 3.5 meters from centre of track.** All works planned within 3.5 meters from centre of running line or which involve working of machineries and vehicles within this zone, are to be done essentially under block protection and necessary safety precautions for protection of track as per para 806 and 807 of IRPWM be taken. This includes even occasional plying of vehicles/ machineries for short durations.
- IV. Works being done between 3.5 meters and 6 meters from centre of track.** Following precautions be taken when works are required to be done between 3.5 meters to 6 meters from track centre or machines/vehicles are required to work/ply within this zone.
- a. Before start of work demarcation should be done parallel to running track at a distance of 3.5 meters from centre of track in advance, as per sketch B, by 150 mm wide white line of lime. Any work or movement of machinery infringing this line will need block protection. Barricading should be put up at such locations, as per sketch C, to ensure that even by carelessness or over sight, vehicles do not infringe fixed dimensions. Barricading design shall be approved by the Engineer.







In case vehicles have to ply or machineries have to work within this zone, DFCCIL's and contractor's supervisors be positioned as shown in sketch D except for the following:

- Instead of a DFCCIL supervisor it would be a responsible and trained staff of the Contractor.
- Additional trained staff of the Contractor, shall be posted where turning of vehicles is required during working e.g. earth work, bridge work, ballasting etc. Location for reversing vehicles should be nominated and it should be selected in such away that there is no danger to running trains at such a location. Such trained staff of the Contractor should be available with hand flags so that vehicles do not come closer to track by 3.5 meters. Wherever vehicles have to take turn, it should be done in such a way that the driver is invariably facing the running track at all times.
- Look out men should be posted along the track at a distance of 800 meters from location of work with red flag and to whistle in face of road vehicles and approaching trains. Look out men shall also be suitably trained staff of Contractor.
- In addition to look out men, caution order needs to be issued to trains and speed restrictions imposed wherever considered necessary through Railways.
- Arrangements should be made to protect the track in case of emergency at work site.
- All temporary arrangements required during execution should be done in a manner that moving dimension is not fringed.
- Individual vehicle/machinery shall not be left unattended at site of work. If it is unavoidable and essential to stable it near running track, it shall be properly secured and manned even during non-working hours with all arrangements to protect the track from infringement.

- Any materials unloaded or shifted along the track should be kept clear of moving dimensions and stacked at a specified distance from running track.
- Movement of vehicle/working of machineries should be prohibited at night. However, in case of emergency when night working is unavoidable, adequate lighting shall be provided with all protection measures as mentioned above in full force. All night working near IR track shall require Engineer's prior approval.
- The work site should be suitably demarcated to keep public and passengers away. Necessary signages, boards, such as "work in progress" etc should be provided at appropriate location to warn public/passengers.
- Contractor's drivers/operators handling vehicles/machineries shall be issued a fitness certificate by the safety officer of the Contractor after educating them about safety norms and after taking assurance in writing for working within vicinity of railway's track.
- While working on cuttings with machineries or when there is movement of vehicles above cutting, if there is possibility of any of the following circumstances, work has to be done under block protection:
 - Any possibility exists for machinery/vehicle after toppling/due to loss of control come over track or infringe it.
 - Chance of machineries/vehicles to come within 3.5 meters from track centre though working beyond it.

1.2 **Safety Fencing :**

- 1.2.1 Before commencing any work close to the running track, the Contractor shall provide safety fencing and obtain the specific permission of Engineer to commence the work in that stretch.
- 1.2.2 The fencing shall be for a height of 2.4 meters with wooden/Casuarina balli posts of length 3 m at 3 m centre to centre spacing as per relevant BOQ item.
- 1.2.3 The Contractor shall maintain the safety fencing in good working condition through out the period till the work in a given stretch is completed. He can remove the fencing after getting the approval of Engineer. The fencing material will be the property of the Contractor. Serviceable materials obtained from the released fencing can be re-used for providing fencing in subsequent stretches.
- 1.2.4 The Contractor will be paid for providing safety fencing along the track as per the relevant item in the BOQ.

- 1.3 The contractor's special attention is drawn to Para 819 of Indian Railways Permanent Way Manual-2020, reproduced below which should invariably be complied with.

***“Safe Working of Contractors** – A large number of men and machinery are deployed by the contractors for track renewals, gauge conversions, doublings, bridge rebuilding etc. It is therefore essential that adequate safety measures are taken for safety of the trains as well as the work force. The following measures should invariably be adopted:*

- (1) *The contractor shall not start any work without the presence of DFCCIL supervisor or his representative and contractor's supervisor at site.*
- (2) *Wherever the road vehicles and/or machinery are required to work in the close vicinity of railway line, the work shall be so carried out that there is no infringement to the Railway's Schedule of Dimensions. For this purpose, the area where road vehicles and/or machinery are required to ply, shall be demarcated, and acknowledged by the contractor. Special care shall be taken for turning/reversal of road vehicles/machinery without infringing the running track. Barricading shall be provided wherever justified and feasible as per site conditions.*
- (3) *The look out and whistle caution orders shall be issued to the trains and speed restrictions imposed where considered necessary. Suitable flagmen/detonators shall be provided where necessary for protection of trains.*
- (4) *The supervisor/workmen should be counselled about safety measures. A competency certificate to the contractor's supervisor as per proforma annexed shall be issued by ADEN which will be valid only for the work for which it has been issued. (Annexure -8/5).*
- (5) *The ballast/rails/sleepers/other P.Way Materials after unloading along track should be kept clear off moving dimensions and stacked as per the specified heights and distance from the running track.*
- (6) *Supplementary site-specific instructions, wherever considered necessary, shall be issued by the Engineer in-charge.*
- (7) *The Engineer in-charge shall approve the methodology proposed to be adopted by the contractor, with a view to ensure safety of trains, passengers and workers and he shall also ensure that the methods and arrangements are actually available at site before start of the work and the contractor's supervisors and the workers have clearly understood the safety aspects and requirements to be adopted/ followed while executing the work.*

There shall be an Assurance register kept at each site, which will have to be signed by both, i.e. Railway Supervisor or his representative as well as the contractor's supervisor as a token of their having understood the safety precautions to be observed at site".

- 1.4 The work of formation in banks and cuttings throughout the length of doubling is adjacent to track under running traffic. Many of the bridges on the proposed double line are to be constructed either as extensions or just adjacent to the existing bridges under running traffic. The work of Installation of Track throughout the length of doubling is adjacent to track under running traffic. The work of Installation of Track and Signals in the Station yards including alterations to the existing Track and Signals has to be done adjacent to or in replacement of the existing Track and Signals which are under running traffic. The contractor shall ensure that the safety of the running lines and running traffic is not endangered, because of his work.
- 1.5 Any traffic/traction blocks, temporary speed restrictions and caution orders required in this connection shall also be got sanctioned from the DFCCIL authorities well in advance, through the Engineer. The DFCCIL may sanction the same for specific sites within the overall recovery time available in the Railway's time table. The contractor shall have to schedule his programme according to the convenience

of the DFCCIL. No claim from the contractor for any delay/inconvenience/loss on this account shall be entertained by the DFCCIL.

- 1.6 The contractor shall provide at site at his own cost, all protection measures including exhibition and lighting of all Temporary Engineering Signals as per Railway rules, instructions and norms. All lights provided by the contractor shall be screened so as not to interfere with any signal light on the Railways or with any traffic or signal lights of any local or other authority.

2 SAFETY MEASURES

2.1 GENERAL

- 2.1.1 The Contractor shall be fully responsible for the safety of the Works, his personnel, sub contractors' personnel, the public and all persons directly or indirectly associated with the Works or on or in the vicinity of the Site.
- 2.1.2 The Contractor shall treat safety measures as a priority in all his activities throughout the execution of the Works.
- 2.1.3 The project site safety requirements have been provided in Part 2 "Works Requirement, Section VII, .
- 2.1.4 The contractor shall not start any work without the presence of DFCCIL supervisor at site.
- 2.1.5 The Contractor shall comply with these requirements provided that the standards set out in the project Site Safety requirements and Contractor's Site Safety plan shall be regarded as the minimum to be achieved and shall not relieve the Contractor of any of his statutory duties or his responsibilities under the Contract.
- 2.1.6 The provisions of the Contract regarding safety shall apply to and be binding upon the Contractor for any part of the Works and the persons employed by sub-contractors of any tier.
- 2.1.7 The Contractor shall ensure that the requirements of the Contract in respect of safety are included in all sub-contracts placed by him.
- 2.1.8 The Engineer reserves the right to order the immediate removal and replacement of any item of Contractor's equipment or Temporary Works which, in his opinion, is unsatisfactory for its purpose or is in an unsafe condition.
- 2.2 The works included in this contract are to be carried out close to the running tracks and public utilities, therefore, safety of running trains and the public is paramount. Therefore, all activities undertaken by the Contractor / his Sub-contractors shall ensure safety at all times. The contractor shall comply with the instructions issued by the Railway / Engineer /DFCCIL from time to time to ensure safe running of trains while carrying out works. The rates quoted by the Contractor shall be deemed to include all expenditure incurred in compliance with the same.
- 2.3 Before starting any excavation work adjacent to existing track, the contractor shall ensure that necessary permissions have been obtained and required precautions have been taken for doing such work in terms **Indian railway Joint Procedure Order** reproduced below:

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)**

No.2003/Tele/RCIL/1 Pt.IX

New Delhi dated 24.06.2013

**General Managers,
All Indian Railways.**

Telecom Circular No. 17/ 2013

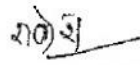
**Sub: Procedure for undertaking digging work in the vicinity of Signaling,
Electrical and Telecommunication Cable.**

JPO No. 1/Sig/2004 dated 16.12.2004 issued by Board on the subject matter was reviewed in consultation with Signal, Electrical, Civil Engineering and Works Directorates of Board.

2. The same has now been finalized and a copy of the Revised Joint Procedure Order duly signed by ED/TD, EDCE/P, ED/SD, ED/W and EDEE/M is attached for compliance.

3. Please acknowledge receipt.

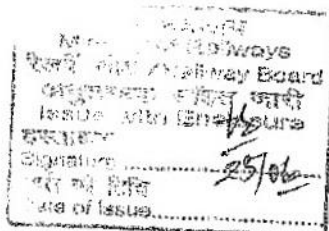
DA: 1 in 5 pages.


(Rakesh Ranjan)
Director(Telecom).

Copy to:-

- i) ED/TD, EDCE/P, ED/SD, ED/W and EDEE/M
- ii) CSTEs, All Indian Railways
- iii) CSTEs/Construction, All Indian Railways
- iv) ED/Tele, RDSO, Lucknow
- v) MD/RCIL, 143, Institutional Area, Sector 44,
Gurgaon – 122003.Haryana.

o/c




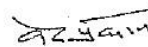
Annexure to Telecommunication Circular No. 17/2013**JOINT PROCEDURE ORDER FOR UNDERTAKING DIGGING WORK
IN THE VICINITY OF UNDERGROUND SIGNALING, ELECTRICAL &
TELECOMMUNICATION CABLES.**

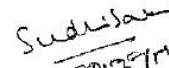
- A. A number of Engineering works in connection with gauge conversion/doubling/third line are in progress on various Railways, which require extensive digging work near the running track, in close vicinity of the working S&T cables carrying vital safety circuits as well as electrical cables feeding the power supply to cabins, ASM room, RRI Cabin, Intermediate Block Huts (IBH) etc. Similarly, S&T organisation under open line or construction units under CAO/C, are executing various Signaling and Telecom works requiring digging of earth for laying of cables or casting of foundations for the erection of signal posts etc. RailTel is also executing the work of laying of quad cable and OFC on various Railways as a part of sanctioned works for exclusive use of Railways for carrying voice and data i.e. administrative and control communication, PRS, FOIS etc. or shared by RailTel Corporation of India Ltd. On certain sections digging is also required for laying of electrical cable and casting of foundation for the erection of OHE masts by Electrical Deptt. Generally, these works are executed by contractors employed by these organisations.
- B. However, while carrying out these works in the vicinity of working signaling, telecommunication and electrical cables, at times, cable cuts take place due to JCB machines working along the track or during the digging work being done by contractors carrying out the Civil Engineering works. Similarly, such cable cuts are also resulting due to works undertaken by S&T or Electrical departments. Such cable faults results in the failure of vital signaling and telecommunication circuits & electrical installations.
- C. Henceforth, the following joint procedure shall be followed by Engineering, Electrical and S&T (and RailTel organisation, wherever such works are being done by them) officers of the respective divisions and by the construction organisation, while carrying out any digging work near to existing signaling & telecommunication and electrical cables, so that the instances of cable cut due to execution of works, can be controlled and minimized.
1. S&T department (and RailTel, where they have laid the cables) and Electrical department shall provide a detailed cable route plan showing exact location of cable at an interval of 200 m or wherever there is change in alignment so that the same is located easily by the Engineering official/contractor. In addition, S&T department and Electrical department shall also provide cable markers along the alignment of the cable. These cable route plans shall be made available to the Sr.DEN/DEN or Dy.CE/C, as the case may be, by Sr. DSTE/DSTE or Sr.DEE/DEE of the divisions or Dy. CSTE/C or Dy. CEE/C within 15 days in


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ED/CE

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Sr. DSTE/DSTE


ED/W


Sr. DSTE/DSTE

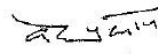
- duplicate. Sr. DEN/DEN or Dy.CE/C will send copies to their field unit i.e. AEN/SE/P. Way & Works.
2. Before taking up any digging activity on a particular work by any agency, Sr. DSTE/DSTE or Sr.DEE/DEE of the section shall be approached in writing by the concerned Engg. or S&T or Electrical officer for permitting to undertake the work. Sr.DSTE/DSTE or Sr.DEE/DEE, after ensuring that the concerned executing agencies including the contractor have fully understood the S&T and Electrical cable route plan, shall permit the work in writing within 7 days of the request by concerned department.
 3. After getting the permission from S&T or Electrical department as the case may be, the relevant portion of the cable route plan shall be attached to the letter through which permission is issued to the contractor by concerned Engg. official for commencement of work and ensuring that the contractors have fully understood the cable route plan and precautions to be taken to prevent damage to the underground cables. The contractor shall be asked to study the cable plan and follow it meticulously to ensure that the safety of the cable is not endangered. Such a provision, including any penalty for default, should form part of agreement also. It is advisable that a suitable post of SE/Sig or SE/Tele or SE/Electrical(TRD or G) shall be created chargeable to the estimates of doubling/gauge conversion, who can help Engg. agencies in the execution of the work. However basic responsibility will be of the department executing the work and the contractor. Creation of posts is not mandatory.
 4. The SE/P.Way or SE/Works shall pass on the information to the concerned SE/Sig. or SE/Tele or SE/Electrical(TRD or G) about the works being taken up by the contractors in their sections at least 3 days in advance of the day of the work. In addition Engineering control shall also be informed by SE/P.Way or SE/Works, who in turn shall pass on the information to the test room/network operation center of RailTel/TPC/Electrical control.
 5. On receiving the above information, SE/Sig or SE/Tele or SE/Electrical(TRD or G) shall visit the site on or before the date of taking up the work and issue permission to the contractor to commence the work after checking that adequate precautions have been taken to avoid the damage to the cables. The permission shall be granted within 3 days of submission of such requests.
 6. The name of the contractor, his contact telephone number, the nature of the work shall be notified in the Engineering control as soon as the concerned Engineering officials issue the letter authorizing commencement of work to the contractor. Test room shall be given copies. Test room shall collect any further details from the Engineering control and shall pass it on to S&T/RailTel & Electrical officials regularly. In case the supervisors of concerned departments do not turn up on the day as advised in terms of para 4 and 5 above, the works of contractor should not be stopped on this account.

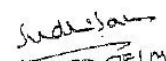

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7. In case of works being taken up by the State Government, National Highway Authority etc., the details of the permission given i.e. the nature of work, kilometer etc. be given to the Engineering control including the contact person's number so that the work can be done in a planned manner. The permission letter shall indicate the contact numbers of Test room/Network Operating Centre of RailTel/TPC/Elect. Control.
8. Where the nature of the work taken up by the Engineering department is such that the OFC or other S&T cables or Electrical cables is to be shifted and relocated, notice of minimum one week shall be given so that the Division/RailTel/Construction can plan the works properly for shifting. Such shifting works shall in addition, for security and integrity of the cables, be supervised by S&T supervisors/RailTel supervisors/Electrical supervisors.
9. The concerned SE/P.Way/SE/Works/SE/Sig/SE/Tele/ SE/Electrical(TRD or G) or RailTel supervisors supervising the work of the contractor shall ensure that the existing emergency sockets are not damaged in view of their importance in providing communication during accident/emergency.
10. In case of minor nature of works where shifting of cable is not required, in order to prevent damage to the cable, the Engineering contractor shall take out the S&T or optical fibre cable or Electrical cable carefully from the trench and place it properly alongside at a safe location before starting the earthwork under the supervision of SE/Sig. or SE/Tele or SE/Electrical(TRD or G). The cable shall be reburied soon after completion of excavation with proper care including placement of the brick over the cable under the supervision of S&T or Electrical supervisors. However, the work will be charged to the concerned engineering works. The responsibility for ensuring availability of SE (Signal), SE (Electrical) as per para 4 and 5 above lies with the respective department. The contractor will go ahead with the shifting of cables as per the program decided and he will not be held responsible for any cable cut.
11. In all the sections where major project are to be taken up/going on RailTel/S&T department shall deploy their official to take preventive/corrective action at site of work. As regards Electrical Department, the official may be deputed on need basis.
12. No new OFC or quad cable shall be laid close to the existing track. It shall be laid close to the Railway boundary on one side of the Railway track to the extent possible to avoid any interference with the future works (doubling etc.). It shall be ensured in the new works of cable laying that the cable route is properly identified with electronic or concrete markers. Wherever multiple cables are laid in a trench, RFID markers may be provided for easy identification of the cable. Henceforth, wherever cable laying is planned, before undertaking the cable laying work, the cable route plan of the same shall be prepared by the Dy.CSTE/C or Dy.CEE/C

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and shall be got approved from the concerned Sr. DSTE/DSTE or Sr. DEE/DEE and also from the concerned Dy. CE/C for new lines and from the concerned Sr.DEN for all other projects including doubling GC etc., to avoid possible damage in future. Such approval shall be granted within 15 days of the submission of the request.

13. The works of excavating the trench and laying of the cable should proceed in quick succession, leaving a minimum time between the two activities.
14. In case damage is caused to OFC/Quad cable during execution of the work, the contractor is liable to pay a penalty for damaging the cable. Penalty shall not be levied in case of the following:-
- (i) Detailed cable route plan as per clause C-1 not provided by concerned department or cable is not protected as per laid down procedures.
- (ii) The alignment of the cable does not tally with the information provided to the contractor.
- (iii) The cable depth is found to be less than 800 mm from normal ground level.
- (iv) No representative of S&T department/RailTel was available at site guarding the cables on the fixed pre determined date and time.
15. Penalty to be imposed for damages to cable shall be as under:-

Cable damaged	Penalty per location
Only Quad cable or Signaling cable	₹ 1.0 Lakh
Only OFC	₹ 1.25 Lakh
Both OFC & Quad	₹ 1.5 Lakh
Electrical Cable	₹ 1.0 Lakh


Necessary debit in this regard shall be raised on the department undertaking the work who shall in turn levy the penalty on the defaulting contractor. S&T department shall raise the debits in case of damage to OFC or Quad or Signaling cable and Electrical department shall raise the debits in case of damage to Electrical cable.

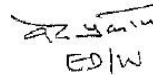
16. Railways will not lodge FIR with RPF in cases of works being executed by authorized contractors of Railways who have been duly permitted to execute the works in accordance with this JPO. Joint note by the supervisors of the concerned department shall be prepared and the responsibility of the cable cut should be decided without involving RPF. The joint note deciding the fact whether the contractor should be penalized shall be completed in a day's time from the occurrence of cable cut.

In all other cases, when the cable is cut by an agency that was not permitted to execute any work, FIR should be lodged with RPF.


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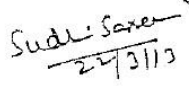
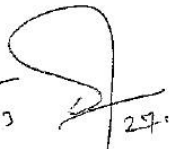
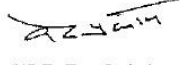


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17. While giving permission for taking up the works, concerned departments may note that earthwork by engineering contractors will normally be done by machines except in a few isolated locations where the quantity of earth work is very less.
 18. Railways shall make necessary correction in their future contract so that this JPO can also be enforced contractually.
 19. In case of damage to OFC, RailTel should be paid 5/6th of the penalty recovered. RailTel shall raise demands on the S&T department in this regard.
 20. All types of signaling & OHE bonds i.e. rail bond, cross bond and structure bond shall be restored by the contractor with a view to keep the rail voltage low to ensure safety of personnel.
-
21. Above joint circular shall be applicable for construction as well as open line organisation of Engineering, S&T & Electrical.
 22. S&T cable and electrical cable route plan should be prepared by the concerned S&T and Electrical officers respectively and got approved as stipulated in para C-12 before undertaking the work. The completion cable route plan should be finalized block section by block section as soon as the work is completed.
 23. All cable laying works shall be executed as per laid down technical specifications, such as protection measures/protective cover, compaction of refilled material etc.

				
(Rajeev Sharma)	(S K Saxena)	(Shobhan Chaudhuri)	(V P Dudeja)	(Surinder Pal)
Exec. Dir.	Exec. Dir.	Exec. Dir.	Exec. Dir.	Exec. Dir.
Signal Devel.	Elect. Enery (M)	Telecom (Dev)	Works	Civil Engg.(P)

3 Safety of Public

- 3.1 The Contractor shall be responsible to take all precautions to ensure the safety of the Public whether on Public or Railway/DFCCIL property and shall post such look out men as may in the opinion of the Engineer be required to comply with regulations pertaining to the work.
- 3.2 The Contractor shall provide effective barricading using G.I. corrugated sheets around foundation pits, trenches, erection sites, demolition sites etc., to prevent accidents and injuries to the public. He shall erect barricading duly leaving safe passage for the movement of the public as per the directions of Engineer.
- 3.3 Payment will be made for providing such barricading in the relevant item of schedule.

3.4 Reporting of Accidents

The Contractor shall report to the Engineer details of any accidents as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the Engineer and the Railways/DFCCIL immediately by the quickest available means.

4 Life-saving Appliances and First-aid Equipment:

The Contractor shall provide and maintain upon the Works sufficient, proper and efficient life-saving appliances and first-aid equipment to the approval of the Engineer and in accordance with the requirements of ILO Convention No. 62. The appliances and equipment shall be available for use at all time.

4.1 FIRST AID BASE

- 4.1.1 First aid bases shall be located at each of the Contractor's principal Works Area.
- 4.1.2 The base shall consist of a treatment room fitted with two treatment couches, a hand wash basin, sterilising equipment and lockable cupboards to contain sufficient medical supplies for the Contractor's personnel, the DFCCIL's personnel, the Engineer's personnel and the interfacing contractor working in the area and any visitors to the Site.
- 4.1.3 In addition, two stretchers shall be stored, available for instant use.
- 4.1.4 The first aid base shall contain a recovery room that shall be furnished with six chairs and a centre table.
- 4.1.5 The first aid base shall be air-conditioned.

4.2 STAFFING

- 4.2.1 A qualified doctor shall be available on call during all times when work is being undertaken on Site.
- 4.2.2 In each Site office and location at least one employee of the Contractor shall be trained in first aid and shall be available during all working hours for the purpose of attending to emergencies.
- 4.2.3 The Contractor may have a tie-up with the local health centres where they are unable to implement any of the above services.

4.3 EQUIPMENT

- 4.3.1 A fully equipped ambulance and driver shall be available on call during all working hours.
- 4.3.2 The ambulance shall be equipped with emergency life support equipment suitable for application in construction Site accidents.
- 4.3.3 Portable first aid boxes will be maintained fully equipped at each of local Site offices and work locations where twenty (20) or more persons work at a time.

5 Security Measures

- 5.1 The Contractor shall be responsible for the security of the Site for the full time the Site is in its possession, except for the specific case of the DFCCIL Envelope after handover to the DFCCIL.
- 5.2 The Contractor shall always maintain all Site boundary fences in good condition, and shall so arrange site boundary fences at all access drainage points of work areas that it's use of such access points etc., is not restricted by the system or method of achieving the required security measures.
- 5.3 Notices shall be displayed at intervals around the Site to warn the public of the dangers of entering the Site.
- 5.4 During the progress of the Works the Contractor shall maintain such additional security patrols over the areas of the Works as may be necessary to protect its own and its sub-contractor's work and equipment and shall co-ordinate and plan the security of both the work under this Contract and the work of others having access to and across the Site and the Works.
- 5.5 The Contractor shall liaise with the sub-contractors and the contractors responsible for the adjacent and other interfacing contracts and ensure that co-ordinated security procedures are operated, in particular in respect of vehicles permitted to pass through the Site and/or the adjacent sites in the latter periods of the Contract.
- 5.6 Contractor's as well as Sub Contractor's employees and representatives shall wear identification Badges (cards), uniforms, helmets, gum boots and other safety / protection gadgets / accessories provided by the Contractor. Badges shall identify the Contractor and show the employee's name and number and shall be worn at all times while at site.
- 5.7 All vehicles used by the contractor shall be clearly marked with the Contractor's name or identification mark.
- 5.8 The contractor shall be responsible for security of works for the duration of the contract and shall provide and maintain continuously adequate security personnel to fulfil these obligations. The requirements of security measures shall include, but not be limited to, maintenance of Law and Order at site, provision of all lighting, guard, flagmen, and all other measures necessary for protection of works within the colonies, camps and elsewhere at site, all materials delivered to the site and all persons employed in connection with the works continuously throughout working and non-working periods including nights, Sundays and holidays, for the duration of the contract. However, at work sites in close proximity of traffic corridors where public and traffic are likely to come close to the work area, suitable barricading as proposed by contractor and approved by Engineer shall be provided.
- 5.9 No separate payment will be made for providing security measures and will be deemed to be included in the rates quoted by the contractor.

5.10 It is presumed that Tenderers have gone through the Rail Vikas Nigam Ltd.'s above mentioned letters including any subsequent instructions on this issue if any, before quoting the rates.

6 Safety precautions: General

Safe working of contractors: A large number of men and machinery are deployed by the contractors for track renewals, gauge conversions, doublings bridge rebuilding etc. it is therefore essential that adequate safety measures are taken for safety of the trains as well as the work force. The following measures should invariably be adopted.

- i) The contractor shall not start any work without the presence of DFCCIL supervisor at site.
- ii) Where ever the road vehicles and/or machinery are required to work in the close vicinity of railway line, the work shall be so carried out that there is no infringement to the railway's schedule of dimensions. For this purpose the area where road vehicles and/or machinery are required to ply, shall be demarcated and acknowledged by the Contractor. Special care shall be taken for turning/reversal of road vehicles/machinery without infringing the running track. Barricading shall be provided wherever justified and feasible as per site conditions
- iii) The look out and whistle caution orders shall be issued to the trains and speed restrictions imposed where considered necessary. Suitable flagmen/detonators shall be provided where necessary for protection of trains.
- iv) The supervisor/workmen should be counselled about safety measures. A competent certificate to the contractor's supervisor as per proforma annexed shall be issued by AEN which will be valid only for the work for which it has been issued.
- v) The unloaded ballast/rails/sleepers/other P. Way materials after unloading along track should be kept clear off moving dimensions and stacked as per the specified heights and distance from the running track.
- vi) Supplementary site specific instructions, wherever considered necessary, shall be issued by the Engineer-in-charge.

7 Precautions in Electrified Section

7.1 Protection of work sites and obtaining work blocks for repair and maintenance works undertaken by Engg./Signalling/Electrical (Traction) etc.

7.2 To work in the electrified areas, the staff, supervisors and officers at work sites should familiarise themselves with relevant provisions of ACTM for guidance and necessary action as given below :-

(i) Signalling & Telecommunication staff.

Signalling & Telecommunication staff working on sections equipped with 25 kv A.C. Traction, should follow instructions given in para 10429 to 10433 of the Manual of A.C. Traction, Volume I.

(ii) Engineering Staff.

Whenever working in the vicinity of the tracks equipped with 25 kV AC traction, instructions given in para 10420 to 10428 Manual of A.C. Traction Volume I, and those given in the supplement to Part 'J' of Chapter II of the Indian Railways Permanent Way Manual, must be followed by the Engineering Staff.

(iii) Bridge Staff.

No work of painting/scraping of any structure including bridges shall be undertaken within 2 metre from live overhead equipment without obtaining permit to work from an authorised person in accordance with SR 17.09 (2)

(iv) Electrical (General Services) Staff.

Electrical (General Services) staff working on high tension/low tension lines in the vicinity of tracks equipped with 25 kV A.C. traction should take precautions given in para 10400 of the manual of A.C. Traction. Volume I.

(v) Electrical (Tractions Distribution) Staff.

- (a) OHE staff when using ladders for lifting or supporting overhead wires which may disturb OHE temporarily and is likely to endanger safety of staff/passengers, must get look out caution orders (driver to whistle continuously) and ensure that danger signals have been shown. In case of work being carried out within station limits, written permission of the Station Master should also be obtained as per SR 17.03 (8) (2).
- (b) In all OHE works where there is a possibility of infringement to moving dimension such as replacement of Catenary or Contact wires, replacement or POH of Cantilevers, replacement of cut-in insulators etc. the work must be carried out by taking full Traffic Block along with the Power Block.

7.3 All Departments.

- (a) In addition to the above, it may be ensured by staff, supervisors & officers of all departments, that no work in the vicinity of 2 mtrs. of live OHE/PSI should be carried out without obtaining "Permit to work" (Ref.: Para 20334 of ACTM Vol.IIPt.I).
- (b) While undertaking cable laying work at stations, precautions must be taken by all concerned to avoid damage to the existing Electrical and Signal & Telecommunication cables in the stations/yards, as follows:-
- (i) Before starting the excavation in yards/stations/officer residential complex, a joint survey must be conducted by the supervisor of Civil, Electrical, Signal & Telecommunication & Construction Departments. After deciding the route a plan should be prepared which should be jointly signed by the supervisors of all departments and countersigned by the concerned Sr: Scale Officers.
- (ii) Before the commencement of the excavation, the route must be marked on the ground.
- (iii) Where there are large no. of cables/difficult locations, the excavation work shall not be undertaken without a responsible nominee of the department owning the cables being present at site.
- (iv) Supervisor of department undertaking cable laying work/excavation should be available at site to ensure that the excavation site is free from other cables and ensure that no cables are damaged during excavation.
- (v) Track crossing should be done under the supervision of a responsible Engg. Official.
- (vi) While working, if an existing cable gets damaged, it should be immediately brought to the notice of the supervisor & officers of the concerned department who should immediately take remedial measure to rectify the damage.

TENDER FORMS (INCLUDING SCHEDULE OF PRICES)

CHAPTER – I
TENDER FORMS
(INCLUDING SCHEDULE OF PRICES)
TENDER FORMS

FORM No.	SUBJECT
Form No. 1	Offer Letter
Form No. 2	Tenderer's Credentials
Form No. 2A	Technical Eligibility Criteria Details
Form No. 2B	Financial Eligibility Criteria Details
Form No. 2C	Applicant's Party Information Form
Form No. 3	Summary of Prices
Form No. 4	Schedule of Prices and Total Prices
Form No. 5	Contract Agreement
Form No. 6	Performance Guarantee Bond
Form No. 7	Standing indemnity bond for on account payment
Form No. 8	ECS / NEFT / RTGS
Form No. 9	Draft MOU for Joint Venture Participation
Form No.10	Draft Agreement for JV
Form No.11	Pro-forma of Participation from each partner of JV
Form No.12	Power of Attorney for authorized signatory of JV Partners
Form No.13	Power of Attorney to lead partner of JV
Form No. 14	Performa for Time Extension
Form No. 15	Certificate of Fitness
Form No. 16	Performa of 7 days'' Notice
Form No. 17	Performa of 48 Hours'' Notice
Form No. 18	Performa of Termination Notice
Form No. 19	Format of Bank Guarantee for Mobilisation
Form No. 20	Format of Integrity Pact
Form No. 21	Anti-profiteering

Form No.22	Format for certificate to be submitted /uploaded by tenderer along with the tender documents
Form No.23	Tender's Credential (BID Capacity)
Form No.23A	Statement of Works in Progress for Bid Capacity
Form No. 24	Final Supplementary Agreement
Form No. 25	Agreement towards Waiver under Section 12(5) and Section 31A (5) of Arbitration and Conciliation (Amendment) Act
Form No. 26	(Bid Security) Bank Guarantee Bond from any scheduled commercial bank of India
Form No. 27 A	Proforma Of 14 Days' Notice For Offloading Of Part Of Contract Work
Form No. 27B	Notice For Part of Contract Work Offloaded
Form No. 28	MOU- Electrical Work
Form No . 29	Summary of Insurances
Form No. 30	Format for Affidavit
Form No: 31	Certificate is to be given by attorney/authorized signatory member of Partnership firm/JV/HUF/LLP
Form No: 32	Details Of Plant and Machinery Already Available With The Firm
Form No: 33	List Of Engineers/Personnel Already Available/ Proposed To Be Employed For Deployment On This Work
Form No: 34	Certificate of No Relative being an Employee of DFCCIL
Appendix-1	Checklist for tenderers

OFFER LETTER

Tender No.

Work of “*Construction of RCC Pipe bridges(17nos) of 1600mm inner Diameter at Scattered locations by Micro tunneling Method below IR and DFC Embankment besides existing Minor Bridges parallel along with Diva-Vasai Section of Central Railway for JNPT-Vaitarana Section of DFCCIL*”.

To,

Chief General Manager,
DFCCIL, Mumbai South

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda.
- (b) We offer to execute the Works in conformity with the Bidding Documents;
- (c) Our bid shall be valid for a period of 90 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) We have not been blacklisted/banned in accordance with para.1.3.13.7 of Preamble and General Instructions to tenderers.
- (e) We are neither Bankrupt/Insolvent nor in the process of winding-up nor there is a case pending before any Court on deadline of submission of the Bid in accordance with para. 1.3.13.7 of Preamble and General Instructions to tenderers.
- (f) If our bid is accepted, we commit to obtain a Performance Guarantee in accordance with the Bidding Documents;
- (g) If our bid is accepted, we commit to deploy key equipment and key personnel consistent with the requirements of the work.
- (h) We understand that this bid, together with your written acceptance thereof included in your notification of award/Letter of Acceptance (LOA), shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (i) All information, statements and description in this bid are in all respect true, correct and complete to the best of our knowledge and belief and we have not made any tampering or changes in the bidding documents on which the bid is being submitted and if any tampering or changes/incorrect information are detected at any stage, we understand the bid will invite summarily rejection and forfeiture of bid security, the contract will be liable to be

terminated along with forfeiture of performance security, even if LOA has been issued.

- (j) We understand that you are not bound to accept the lowest bid or any other bid that you may receive.

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

.....

Date

FORM No. 2

TENDERER'S CREDENTIALS

S. No	Description
1.	For technical experience/competence, give details of similar completed works during the last Seven financial years (i.e. current financial year and three previous Financial Years) in the Performa given in Form-2A
2.	For financial capacity and organizational resources, give details of contractual payments received for the last three financial years (i.e. current financial year and three previous financial years) as per audited balance sheet certified by Chartered Accountant in the Performa given in Form-2B
3.	Give constitution of your firm. Attach certified copies of legal documents in support thereof. Form-2C

**DETAILS OF COMPLETED SIMILAR WORKS IN SUPPORT OF FULFILLING TECHNICAL
ELIGIBILITY CRITERIA**

Details of the similar works completed (as per Para 1.3.13.1 of Preamble and General Instruction to Tenders)

S No	Item	1 st Work	2 nd Work	3 RD Work
1	Name of the Work			
2	Name of Organization/ Employer			
3	Contract Agreement No and Date			
4	Original Value of Contract Agreement			
5	Final cost of Completed work			
6	Original date of Completion			
7	Actual Date of Completion			
8	Scope of work			
9	Amount of work executed having similar nature of work			
10	If partner in a JV or subcontractor, specify participation in total contract amount Percent of Total: Amount: INR			
11	Description of the similarity in accordance with Technical Eligibility Criteria and as mentioned in Completion certificate			
12	Completion Certificate Uploaded with tender at Page no.			

Signature of Tenderer

Name & Designation

Date:

Note:

1. The tenderer must have successfully completed any of the following during *last 07(seven) years, ending last day of month previous to the one in which tender is invited.*
 1. Three similar works costing not less than the amount equal to 30% of advertised value of each component of tender, or

2. Two similar works costing not less than the amount equal to 40% of advertised value of each component of tender, or
 3. One similar work costing not less than the amount equal to 60% of advertised value of each component of tender.
- 2. The Tenderer shall attach a copy of the Completion Certificate(s) issued by the employer in support of the information being furnished, failing which the claim of the tenderer for fulfilling Technical Eligibility Criteria shall be liable to be rejected.**
- 3. Completion Certificate issued by the Government Organization or Private (Refer detailed guidelines in Para 3.4.1) in favour of Name of the firm who had executed the work duly stating following must be attached.(As per Annexure-VI)**
- a. **Name of work**
 - b. **Name of Firm Executing the work** (If partner in a JV or subcontractor, specify participation in total contract amount)
 - c. **Completion cost of the Work,**
 - d. **Original Date of Completion,**
 - e. **Status of Work (Physically Completed or In Progress)**
 - f. **Status of Final Bill.**
 - g. **Actual Date of Completion,**
 - h. **Scope of work clearly defining the Similarity of work**
 - i. **Employer's Name, Current Address and Current Telephone/Fax Number, E-mail**
4. In Case more than one work is Proposed in support of Technical Eligibility Criteria, Same Performa shall be submitted for multiple works
 5. In case of Composite nature of works, same Performa shall be submitted for multiple works for all components of works in case of Composite works.
 6. In case of JV, each member of JV shall submit the details of works in this proforma in support of claim of the tenderer for fulfilling Technical Eligibility Criteria .
 7. All Documents must be submitted/uploaded along with tender/bid, failing which the claimed credentials as above will not be considered at the time of evaluation of Tender.
 8. No printed Document like annual report etc. should be attached with Tender Document

FORM 2AA

Completion Certificate of Similar Nature of Works
(On Letter head of Issuing Organization with full Particulars)

SN	Item	Details
1	Name of the Work Physically Completed	
2	Date of Award of Contract	
3	Contract Agreement No and Date	
4	Particulars of Firm Executed the work	
(i)	Name of Firm with Address	
(ii)	PAN No of Firm	
(iii)	In case of JV, Name and % Share of Individual Firms	
5	Original Value of Contract Agreement	
6	Original Date of Completion	
7	Actual date of Completion	
8	Has the Work been Physically Completed (Yes / No)	
9	Final Value of Contract as Completed in Rs. (if Final Billpaid)	
10	Total Payment made in above Contract till Date of Opening of Present Tender Including PVC (Rs.)	
11	In case of Composite/Combined Work involving Civil / Electrical / S&T Works: [see note(v) below] – Payment made for relevant distinct Component of Work out of Total Payment made under SN-10 above.	
12	Scope of Completed Work	
13	Whether Work includes activities as per "Similar Nature of Work" (& Payment made for relevant distinct Component of Work) i.e. (Definition of Similar Nature of Work to be filled by DyChief Engineer)	
14	Performance of Contractor (Satisfactory/Unsatisfactory)	
15	Any other Relevant Information	

I hereby certify that above mentioned work has been physically completed in all respect as per contract agreement. Performance of the contractor while executing the work had been satisfactory.

(Signature)

Name and Designation of officer

Mobile No. of officer

Seal of officer

NOTE:

- (i) Completion Certificates should be submitted for each Work listed in Annexure V (as applicable).
- (ii) Submission of false Completion Certificates of Similar Nature of Works shall lead to forfeiture of EMD and other action including penal action.
- (iii) Copy of Completion Certificate of Similar Nature of Works duly self-attested by Tenderer shall be submitted along with tender document.
- (iv) Payment made as indicated in above certificate (SN 9,10 & 11) will be considered as value of completed work for the purpose of eligibility under Technical Eligibility Criteria.
- (v) Only those works will be treated as composite works which consist of more than one distinct component of work such as Civil Engg. Works, S&T work, Electrical work, OHE work etc.
- (vi) Format given above is for guidance only. Any certificate, containing information in other format asked for, shall be considered.

FORM No. 2B

**FINANCIAL ELIGIBILITY CRITERIA DETAILS
(CERTIFICATE ON THE LETTER HEAD OF CHARTERED ACCOUNTANT)**

Each Bidder or each member of a JV must fill in this form separately:

To,
Chief General manager (Mumbai)
DFCCIL, Mumbai.

Sub: - Contractual receipts of M/s (Name of firm) NAME OF BIDDER/JV PARTNER:
It is to certify that contractual receipts of M/s (Name of firm)..... during current financial year and preceding three financial years upto date of inviting of tender as extracted from audited balance sheets are as under :-

Annual Contractual Turnover Data for the Previous 3/4 Years (Contractual Payment only)			
Year	Amount Currency	Exchange Rate	Indian National Rupees Equivalent
Average Annual Contractual Turnover for last 3 years			

1. The average annual contractual turnover shall be calculated as an average of “total contractual payments” in the previous three financial years. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover.
2. The information supplied shall be substantiated by data in the audited balance sheets and profit and loss accounts for the relevant years in respect of the bidder or all members constituting the bidder.
3. Contents of this form should be certified by a Chartered Accountant duly supported by Audited Balance Sheet duly certified by the Chartered Accountant.

SEAL AND SIGNATURE OF THE BIDDER

Certified that all figures and facts submitted in this form have been furnished after full consideration of all observations/notes in Auditor’s reports. _____

(Signature of Chartered Accountant)

Name of CA: _____

Registration No: _____

(Seal)

**APPLICANT'S PARTY INFORMATION FORM
(GENERAL INFORMATION OF THE TENDERER)**

SN	Item Description	Item Details
1	Name of the Tenderer	
2	Constitution of Tenderer ¹ (Tick as applicable)	Sole Proprietor /Partnership Firm / Pvt. Ltd Co./ Public Ltd. Co./ JV/ Society/ (anyother)
3	Act under which Tenderer is Registered	Company Act, Firm & Societies Act, Co-operative Societies Act, Income- Tax Act, / (any other)etc.
4	Registration details ²	
5	PAN No. ²	
6	GSTIN No. ²	
7	Registered Address	
8	Communication Address along with Telephone, Fax and Email address	
9	In case of Joint Venture (JV), MOU and other details ³	
10	Tenderer's authorized representative information Name: [insert full name] Address: Telephone/Fax numbers: E-mail address:	

Superscript Notes:

1. Please submit/upload the supporting documents demonstrating the status of Applicant / Tenderer as legal person corresponding to its constitution like certificate of incorporation along with Memorandum and Article of Association in case of Pvt./Public Ltd. Co., copy of partnership deed, Affidavit in case of sole proprietor etc. as the case maybe.
2. Please submit/upload the copy of the registration certificate as applicable, PAN card, GSTIN certificate should also been uploaded.
3. In case of Joint Venture, details as per **Form 9** need to be submitted with tender/bid. JV firms are not allowed to participate in the works costing less than or equal to Rs.10.0Crores. (Railway Board letter no: 2002/CE-I/CT/37 JV Pt.VIII Dated: 14.12.2012).

4. Details of all the partners of the subject bank account need to be disclosed by the Tenderer on its letter head under the signature of person who is authorized to operate the subject bank account.

Signature
Name & Designation
(In Capital)

Address
.....
.....

Date.....

FORM No. 3

SUMMARY OF PRICES

(Summary of Prices has been separately attached as per SCHEDULE uploaded at IREPS site)

FORM No. 4

**SCHEDULE OF PRICES & TOTAL PRICES
Tender Schedule**

(Schedule of Prices & Total Prices has been separately attached as per SCHEDULE uploaded at IREPS site)

SAMPLE
AGREEMENT
CONTRACT AGREEMENT

THIS AGREEMENT (“Agreement”) is made at Mumbai on the ___ day of _____

BETWEEN

Dedicated Freight Corridor Corporation of India Limited, incorporated under the laws of India and having its principal place of business at, **Office of the Chief General Manager, Dedicated Freight Corridor Corporation of India Limited, 7th floor, Central Railway New Administrative Building, D.N. Road, Mumbai** (hereinafter called „the Employer“), and -----, a company / corporation / JV incorporated under the laws of -----having its principal place of business at ----- (hereinafter called “the Contractor”).

WHEREAS in reference to a call for Tender for (Name of Work)----- as per Tender paper _____ at Annexure “A” here to, the Contractor has submitted a Tender hereto and whereas the said Tender of the contractor has been accepted for (Name of Work)_____. As per copy of the Letter of Acceptance of Tender No ----- dated --/--/2024 complete with enclosure at the accepted rates and at an estimated of Rs. _____(Rupees _____ only). Now the agreement with witness to that in consideration of the premises and the payment to be made by the Employer to the Contractor provided for herein below the Contractor shall supply all equipment’s and materials and execute and perform all works for which the said Tender of the Contractor has been accepted, strictly according to the various provisions in Annexure “A” and “B” hereto and upon such supply, execution and performance to the satisfaction of the Purchaser, the Purchaser shall pay to the contractor at the several rates accepted as per the said Annexure “B” and in terms of the provisions therein.

IN WITNESS WHEREOF the parties here to have caused their respective Common Seals to be hereunto affixed/ (or have hereunto set their respective hands and seals) the day and year first above written.

For and on behalf of the Contractor

For and on behalf of the Employer

Signature of the authorized official
Name of the official

Signature of the authorized official
Name of the official

Stamp/seal of the Contractor

Stamp/Seal of the Employer

SIGNED, SEALED AND DELIVERED

By the said

By the said

by the said

by the said

_____Name

_____Name

On behalf of the Contractor in the presence of:

On behalf of the Employer in the presence of:

Witness

Witness

Name

Name

Address

Address

Enclosures: -

1. Annexure "A" - Tender Papers No.
2. Annexure "B" - Letter of Acceptance of Tender No. _____ Dated _____
Along with S u m m a r y of Prices

SAMPLE

Name of the Bank _____

Managing Director/ DFCCIL Bank Guarantee Bond No. _____

Acting through _____ (Designation Dated and address of contract signing authority)

PERFORMANCE GUARANTEE BOND

In consideration of the Managing Director / DFCCIL acting through Chief General Manager/DFCCIL/Mumbai South (Designation & Address of Contract Signing Authority), Dedicated Freight Corridor Corporation of India Limited hereinafter called "DFCCIL" having agreed under the terms and conditions of agreement/Contract Acceptance letter No. _____

_____ dated _____ made between _____ (Designation & address of contract signing Authority) and _____ (hereinafter called "the said contractor(s)" for the work _____ (hereinafter called "the said agreement") having agreed for submission of an irrevocable Bank Guarantee Bond for Rs. _____ (Rs. _____ Only) as a performance security Guarantee Bond from the contractor(s) for compliance of his obligations in accordance with the terms & conditions in the said agreement.

1. We (indicate the name of the Bank) hereinafter referred to as the Bank, undertake to pay to the Government an amount not exceeding Rs. _____ (Rs. _____ Only) on demand by the Government.
2. We _____ (indicate the name of the bank, further agree that (and promise) to pay the amounts due and payable under this guarantee without any demur merely on a demand from the Government through the Chief General Manager/ DFCCIL/Mumbai South or _____ (Designation & Address of contract signing authority) DFCCIL, stating that the amount claimed is due by way of loss or damage caused to or would be caused or suffered by the Government by reason of any breach by the said contractor of any of the terms or conditions contained in the said agreement or by reason of the contractor failure to perform the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ (Rs. _____ Only)
- 3 (a) We, _____ (indicate the name of Bank) further undertake to pay to the Government any money so demanded notwithstanding any dispute or dispute raised by the contractor (s) in any suit or proceeding pending before any court or Tribunal relating to liability under this present being absolute and unequivocal.
(b) The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.
4. We, _____ (indicate the name of bank) to further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged by _____ (Designation &

Address of contract signing authority) on behalf of the Government, certify that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor (s) and accordingly discharges this guarantee.

5. (a) Not withstanding anything to the contrary contained herein the liability of the bank under this guarantee will remain in force and effect until such time as this guarantee is discharged in writing by the Government or until (date of validity/extended validity) whichever is earlier and no claim shall be valid under this guarantee unless notice in writing thereof is given by the Government within validity / extended period of validity of guarantee from the date aforesaid.

(b) Provided always that we _____(indicate the name of the Bank) unconditionally undertake to renew this guarantee to extend the period of guarantee form year to year before the expiry of the period or the extended period of the guarantee, as the case may be on being called upon to do so by the Government. If the guarantee is not renewed or the period extended on demand, we _____(indicate the name of the Bank) shall pay the Government the full amount guarantee on demand and without demur.

6. We, _____(indicate the name of Bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without effecting in any manner out of obligations hereunder to vary any of the terms and conditions of the said contract from time to time or to postpone for any time or from time to time any to the powers exercisable by the Government against the said contractor (s) and to forbear or enforce any of the terms and conditions of the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor (s) or for any bearance act or omission on the part of the Government or any indulgence by the Government to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties for the said reservation would relive us from the liability.

7. This guarantee will not be discharged by any change in the constitution of the Bank or the Contractor (s).

8. We, _____(indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing.

9. This guarantee shall be valid up to _____(Date of completion plus 60 days beyond that). Unless extended on demand by Government. Notwithstanding anything to the contrary contained herein before, our Liability under this guarantee is restricted to Rs. _____(Only) unless a demand under this guarantee is Made on us i n writing on or before _____we, shall be discharged f_r om our liabilities under this guarantee thereafter.

Dated _____ the day of _____ For _____(Indicate the name of bank)

Signature of Bank Authorize official

(Name):

Designation:

Full Address.

Witness:

1. _____

2. _____

**SAMPLE
STANDING INDEMNITY BOND FOR “ON ACCOUNT” PAYMENTS
(On paper of requisite stamp value)**

We, M/s _____ hereby undertake that we hold at our stores Depot/s at _____ for and on behalf of the Managing Director/ DFCCIL acting in the premises through the Chief General Manager/ DFCCIL/Mumbai South or his successor (hereinafter referred to as “The Employer”) all materials for which “On Account” payments have been made to us against the Contract for (_____) on the section _____ DFCCIL also referred to as Group/s_ vide letter of Acceptance of Tender _____ dated _____ and material handed over to us by the employer for the purpose of execution of the said contract, until such time the materials are duly erected or otherwise handed over to him.

We shall be entirely responsible for the safe custody and protection of the said materials against all risk till they are duly delivered as erected equipment to the employer or as he may direct otherwise and shall indemnify the employer against any loss /damage or deterioration whatsoever in respect of the said material while in our possession and against disposal of surplus materials. The said materials shall at all times be open to inspection by any officer authorized by the Chief General Manager/DFCCIL/Mumbai South in charge of Dedicated Freight Corridor Corporation of India Limited (Whose address will be intimated in due course).

Should any loss, damage or deterioration of materials occur or surplus material disposed off and refund becomes due, the Employer shall be entitled to recover from us the 85% of supply portion of Part IV, Chapter – II (Form - 4) to the Contract (as applicable) and also compensation for such loss or damage if any long with the amount to be refunded without prejudice to any other remedies available to him by deduction from any sum due or any sum which at any time hereafter becomes due to us under the said or any other Contract.

Dated this day _____ day of _____ 2023 For
and on behalf of
M/s _____ (Contractor) Signature
of witness

Name of witness in Block letter. Address.

ECS / NEFT / RTGS MANDATE FORM

Date: - To,
Dy.CPM/PM/Finance
DFCCIL/Mumbai South
Sub: ECS / NEFT / RTGS payments

We refer to the ECS / NEFT / RTGS set up by DFCCIL for remittance of our payments using RBI's NEFT / RTGS scheme, our payments may be made through the above scheme to our under noted account.

Name of Bank	
Name of City	
Bank Code No	
Name of Bank Branch	
Branch Code No	
Address of Bank Branch	
Telephone Number of Bank Branch	
Fax No of Bank Branch	
Name of customer / Tenderer as per account	
Account Number of Tenderer appearing on cheque book	
Type of Account (S. B. / Current / Cash credit)	
IFSC code for NEFT	
IFSC code for RTGS	
9-Digit-code number of the bank and branch appearing on the MICR cheque issued by the bank.	
Details of Cancelled Cheque leaf	
Telephone no of tenderer	
Cell Phone Number of the tenderer to whom details with regard to the status of bill submitted to Accounts Office i.e. Co6 & Co7 & Cheque Purchase Orders particulars can be intimated through SMS	
Tenderer's E - mail ID	

Confirmed by Bank signature of tenderer with stamp and address Enclose a copy of crossed cheque

**DRAFT MEMORANDUM OF UNDERSTANDING (MOU) For
JOINT VENTURE PARTICIPATION**

BETWEEN

(IF APPLICABLE)

M/s Having its registered office at (Hereinafter referred to as) acting as the Lead Partner of the first part,

and

M/shaving its registered office at (Hereinafter referred to as `.....) in the capacity of a Joint Partner of the other part.

and

M/shaving its registered office at (Hereinafter Referred to as `.....) in the capacity of a Joint Partner of the other part.

The expressions of And Shall wherever the context admits, mean and include their respective legal representatives, successors-in-interest and assigns and shall collectively be referred to as “the Parties” and individually as “the Party”

WHEREAS:

Dedicated Freight Corridor Corporation of India Limited (DFCCIL) [hereinafter referred to as “Client”] has invited bids for “[Insert name of work].....”

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. The following documents shall be deemed to form and be read and construed as an integral part of this MOU.
 - (i) Notice for Bid, and
 - (ii) Bidding document
 - (iii) Any Addendum/Corrigendum issued by Dedicated Freight Corridor Corporation of India Limited
 - (iv) The bid submitted on our behalf jointly by the Lead Partner.

2. The `Parties` have studied the documents and have agreed to participate in submitting a `bid` jointly.

3. M/sshall be the lead member of the JV for all intents and purpose and shall represent the Joint Venture in its dealing with the Client. For the purpose of submission of bid proposals, the parties agree to nominate As the leader duly authorized to sign and submit all documents and subsequent clarifications, if any, to the Client. However, M/s shall not submit any such proposals, clarifications or commitments before securing the written clearance of the other partner which shall be expeditiously given by M/s.....to M/s.....

4. The `Parties` have resolved that the distribution of responsibilities and their proportionate share in the Joint Venture is as under:
 - (a) Lead Partner;
 - (i)

(ii)

(iii)

(b) Joint Venture Partner

(i)

(ii)

(iii)

[Similar details to be given for each partner]

5. JOINT AND SEVERAL RESPONSIBILITIES

The Parties undertake that they shall be jointly and severally liable to the Client in the discharge of all the obligations and liabilities as per the contract with the Client and for the performance of contract awarded to their JV.

6. ASSIGNMENT AND THIRD PARTIES

The parties shall co-operate throughout the entire period of this MOU on the basis of exclusivity and neither of the Parties shall make arrangement or enter into agreement either directly or indirectly with any other party or group of parties on matters relating to the Project except with prior written consent of the other party.

7. EXECUTIVE AUTHORITY

The said Joint Venture through its authorized representative shall receive instructions, payments from the Client. The management structure for the project shall be prepared by mutual consultations to enable completion of project to quality requirements within permitted cost and time.

8. BID SECURITIES

Till the award of the work, JV firm/Lead Partner of JV firm shall furnish Bid Security to the Client on behalf of the joint venture which shall be legally binding on all the members of the Joint Venture.

9. BID SUBMISSION

Each Party shall bear its own cost and expenses for preparation and submission of the bid and all costs until conclusion of a contract with the Client for the Project. Common expenses shall be shared by all the parties in the ratio of their actual participation.

10. INDEMNITY

Each party hereto agrees to indemnify the other party against its respective parts in case of breach/default of the respective party of the contract works of any liabilities sustained by the Joint Venture.

11. For the execution of the respective portions of works, the parties shall make their own arrangements to bring the required finance, plants and equipment, materials, manpower and other resources.

12. DOCUMENTS & CONFIDENTIALITY

Each Party shall maintain in confidence and not use for any purpose related to the Project all commercial and technical information received or generated in the course of preparation and submission of the bid.

13. ARBITRATION

Any dispute, controversy or claim arising out of or relating to this agreement shall be settled in the first

instance amicably between the parties. If an amicable settlement cannot be reached as above, it will be settled by arbitration in accordance with the Indian Arbitration and Conciliation Act 1996 or any amendments thereof. The venue of the arbitration shall be Delhi.

14. VALIDITY

This Agreement shall remain in force till the occurrence of the earliest to occur of the following, unless by mutual consent, the Parties agree in writing to extend the validity for a further period.

- a. The bid submitted by the Joint Venture is declared unsuccessful, or
- b. Cancellation/ shelving of the Project by the client for any reasons prior to award of work
- c. Execution of detailed JV agreement by the parties, setting out detailed terms after award of work by the Client.

15. This MOU is drawn in Number of copies with equal legal strength and status. One copy is held by M/s and the other by M/s..... &M/s And a copy submitted with the proposal.

16. This MOU shall be construed under the laws of India.

17. NOTICES

Notices shall be given in writing by fax confirmed by registered mail or commercial courier to the following fax numbers and addresses:

Lead Partner	Other Partner(s)
.....
(Name & Address)	(Name & Address)

IN WITNESS WHEREOF THE PARTIES, have executed this MOU the day, month and year first before written.

M/s.....	M/s.....
.....
(Seal)	(Seal)

Witness

1..... (Name & Address)

2..... (Name & Address)

Notes: (1) In case of existing joint venture, the certified copy of JV Agreement may be furnished.

DRAFT FORMAT OF JOINT VENTURE AGREEMENT

To be executed on non-judicial stamp paper of appropriate value in accordance with relevant Stamp Act and to be registered with appropriate authority under Registration Act.

The JV agreement shall be structured generally as per contents list given below:

A. CONDITIONS AND TERMS OF JV AGREEMENT

1. Definitions and Interpretation
2. Joint Venture – Include Equity of members, transferability of shareholding of equity of a partner leaving during the subsistence of the contract.
3. Proposal Submission
4. Performance – To indicate scope of responsibility of each member
5. Language and Law
6. Exclusively
7. Executive Authority
8. Documents
9. Personnel
10. Assignment and Third Parties
11. Severability
12. Member in Default
13. Duration of the Agreement
14. Liability and sharing of risks
15. Insurance
16. Sharing of Promotion and Project Costs, Profits, Losses and Remuneration
17. Financial Administration and Accounting
18. Guarantees and Bonds
19. Arbitration
20. Notices
21. Sole Agreement and Variation

B. SCHEDULES

1. Project and Agreement Particulars
2. Financial Administration Services
3. Allocation of the obligations
4. Financial Policy and Remuneration

PRO-FORMA LETTER OF PARTICIPATION FROM EACH PARTNER OF JOINT VENTURE (JV)

(To be executed on non-judicial stamp paper of appropriate value in accordance with relevant Stamp Act and to be registered with appropriate authority under Registration Act.)

No....

Dated

From:

.....
.....

To,
Chief General Manager,
Dedicated Freight Corridor Corporation of India Limited,
7th floor, Central Railway New Administrative Building,
D.N.Road, Mumbai -400001,
Maharashtra.

Re: ... “[Insert name of work]”

Ref: Your notice for Invitation for Bid (IFB) No.....Dated.....

- 1. We wish to confirm that our company/firm has formed a Joint Venture with (i)..... & ii)..... For the purposes associated with IFB referred to above.

*(Members who are not the lead partner of the JV should add the following paragraph) **

- 2. “The JV is led by ... whom we hereby authorise to act on our behalf for the purposes of submission of Bid for and authorise to incur liabilities and receive instructions for and on behalf of any and all the partners or constituents of the Joint Venture.”

OR

*(Member(s) being the lead member of the group should add the following paragraph)**

- 2. “In this group we act as leader and, for the purposes of applying for Bid, represent the Joint Venture:
- 3. In the event of our JV being awarded the contract, we agree to be jointly with i) & ii) (names of other members of our JV) and severally liable to the Dedicated Freight Corridor Corporation of India Limited, its successors and assigns for all obligations, duties and responsibilities arising from or imposed by the contract subsequently entered into between Dedicated Freight Corridor Corporation of India Limited and our JV.

4. **I/We, further agree that entire execution of the contract shall be carried out exclusively through the lead partner.*

Yours faithfully, (Signature)

(Name of Signatory).....

(Capacity of Signatory).....

Company Seal * Delete as applicable

Note: In case of existing joint venture, the certified copy of JV Agreement may be furnished.

FORMAT FOR POWER OF ATTORNEY FOR AUTHORISED SIGNATORY OF JOINT VENTURE (JV) PARTNERS

POWER OF ATTORNEY*

(To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant stamp Act. The stamp paper to be in the name of the company who is issuing the power of Attorney)

Know all men by these presents, we do hereby constitute, appoint and authorise Mr/Ms who is presently employed with us and holding the position ofas our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our bid for the work of..... Including signing and submission of all documents and providing information / responses to Dedicated Freight Corridor Corporation of India Limited, representing us in all matters, dealing with Dedicated Freight Corridor Corporation of India Limited in all matters in connection with our bid for the said project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Dated this the day of 2023.

(Signature of authorised Signatory)

Signature of Lead Partner

Signature of JV Partner(s)

.....

.....

(Signature and Name in Block letters of Signatory)

Seal of Company

Witness

Witness 1:

Name:

Address:

Occupation:

Witness 2:

Name:

Address:

Occupation:

**Notes:*

- i) To be executed by all the partners jointly, in case of a Joint Venture.

12B

FORMAT FOR POWER OF ATTORNEY FOR AUTHORISED SIGNATORY OF COMPANY OR FIRM

(To be executed on non-judicial stamp paper of the appropriate value in accordance with Stamp Duty Act. The stamp paper should be in the name of the Firm / Company who is issuing the Power of Attorney in favour of Authorized Signatory).

POWER OF ATTORNEY

Know all men by these present, we do hereby constitute, appoint and authorize

Mr./Ms. who is presently employed with us and holding the position of as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our bid for the work of including signing and submission of all documents and providing information/ responses to DFCCIL representing us in all matters, dealing with DFCCIL in all matters in connection with our Tender for the said work.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Dated this. day of 202...

Place:

(Signature.....)

Name& Designation in Block letters of Person authorized to sign Power of Attorney for and on behalf of the Applicant Tenderer)

Common Seal of Company I accept.

(Signature of Authorized Signatory) Name and Designation of AS

Notes:

(a) The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

(b) Please refer to **Para 3.6** for requirement of the Documents to be submitted in different cases of tenderer being Sole Proprietor, Partnership, Private / Public Limited Company etc.

(c) The obligations to DFCCIL will not be affected by changes in the composition of the firm made subsequent to the opening of the tender / execution of the contract and / or grant of Revised Power of Attorney, if any, by the tenderer. However, changes in composition of the Firm and / or Revised POA should

be promptly advised in writing to the Tender Issuing Authority / Contract Signing Authority as the case maybe.

Signature
Name & Designation
(In Capital)

Address
.....
.....

Date.....

**FORMAT FOR POWER OF ATTORNEY TO
LEAD PARTNER OF JOINT VENTURE (JV)**

(To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant stamp Act. The stamp paper to be in the name of the company who is issuing the power of Attorney)

POWER OF ATTORNEY*

Whereas Dedicated Freight Corridor Corporation of India Limited has invited Bids for the Work of (Name of Work)

Whereas, the members of the Joint Venture comprising of M/s. ..., M/s. ..., M/s....., and M/s. are interested in submission of bid for the work of ... [Insert name of work] ... in accordance with the terms and conditions contained in the bidding documents.

Whereas, it is necessary for the members of the Joint Venture to designate one of them as the Lead Partner, with all necessary power and authority to do, for and on behalf of the Joint Venture, all acts, deeds and things as may be necessary in connection with the Joint Venture's bid for the project, as may be necessary in connection the Joint Venture's bid for the project.

NOW THIS POWER OF ATTORNEY WITNESSETH THAT:

We, M/s., hereby designate M/s., being one of the partners of the Joint Venture, as the lead partner of the Joint Venture, to do on behalf of the Joint Venture, all or any of the acts, deeds or things necessary or incidental to the Joint Venture's bid for the contract, including submission of bid, participating in conferences, responding to queries, submission of information/ documents and generally to represent the Joint Venture in all its dealings with the Railway / DFCCIL or any other Government Agency or any person, in connection with the Bid/contract for the said work until culmination of the process of bidding till the contract agreement if successful, is entered into with the Dedicated Freight Corridor Corporation of India Limited and thereafter till the expiry of the contract agreement.

**To be executed by all the members of the JV except the lead member.*

The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

We hereby agree to ratify all acts, deeds and things lawfully done by lead member, our said attorney, pursuant to this power of attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us/ Joint Venture.

Dated this the Day of 2023

.....

(Signature)

..... (Name in Block letters of Executants) Seal of
Company

Witness 1	
Name:	
Address:	
Occupation:	
Witness 2	
Name:	
Address:	
Occupation:	

FORM No. 14
Reference para 17B

PROFORMA FOR TIME EXTENSION

No. _____

Dated:

Sub: (i) _____ (*name of work*).
(ii) Acceptance letter no. _____
(iii) Understanding/Agreement no. _____

Ref: _____ (Quote specific application of Contractor for extension to the date received)

Dear Sir,

1. The stipulated date for completion of the work mentioned above is_____. From the progress made so far and the present rate of progress, it is unlikely that the work will be completed by the above date (or “However, the work was not completed on this date”).
2. Expecting that you may be able to complete the work, if some more time is given, the competent authority, although not bound to do so, hereby extends the time for completion from_____to_____.
3. Please note that an amount equal to the liquidated damages for delay in the completion of the work after the expiry of_____ (*give here the stipulated date for completion with/without any penalty fixed earlier*) will be recovered from you as mentioned in Clause, 17-B of the Standard General Conditions of Contract for the extended period, notwithstanding the grant of this extension. You may proceed with the work accordingly.
4. The above extension of the completion date will also be subject to the further condition that no increase in rates on any account will be payable to you.
5. Please intimate within a week of the receipt of this letter your acceptance of the extension of the conditions stated above.
6. Please note that in the event of your declining to accept the extension on the above said conditions or in the event of your failure after accepting or acting up to this extension to complete the work by_____(here mention the extended date), further action will be taken in terms of Clause 62 of the Standard General Conditions of Contract.

Yours faithfully

For and on behalf of the Employer Name of the
Official: -
Stamp/Seal of the Employer

CERTIFICATE OF FITNESS

1. (a) Serial Number _____

(b) Date _____

2. Name of person examined _____

3. Father's Name: son/daughter of _____, Residing at

4. Sex _____

5. Residence: _____

6. Physical fitness

7. Identification marks _____

8. Date of birth, if available, and/or certified age _____

I certify that I have personally examined (name) _____ who is desirous of being employed in a factory or on a work requiring manual labour and that his/her age as nearly as can be ascertained from my examination, is _____ years.

I certify that he/she is fit for employment in a factory or on a work requiring manual labour as an adult/child.

9. Reasons for:

(a) Refusal to grant certificate, or _____

(b) Revoking the certificate _____

Signature of tenderer (S)

Signature or left hand

Thumb impression of the person examined.

Signature of Certifying Surgeon

Note: In case of physical disability, the exact details and cause of the physical disability should be clearly stated

PROFORMA OF 7 DAYS NOTICE

DFCCIL

(Without Prejudice)

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. In spite of repeated instructions to you by the subordinate offices as well as by this office in various letters of even no. _____, dated _____; you have failed to start work/show adequate progress and/or submit detailed program me for completing the work.
2. Your attention is invited to this office/Chief Engineer's office letter no. _____, dated _____ in reference to your representation, dated _____.
3. As you have failed to abide by the instructions issued to commence the work/to show adequate progress of work you are hereby given 7 days' notice in accordance with Clause 62 of Standard General Conditions of Contract to commence works / to make good the progress, failing which further action as provided in Clause 62 of the Standard General Conditions of Contract viz. to terminate your Contract and complete the balance work without your participation will be taken.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the Employer Name
of the Official: - Stamp/Seal of the
Employer

FORM No. 17
Registered Acknowledgement Due

PROFORMA OF 48 HRS. NOTICE
DFCCIL
(Without Prejudice)

To

M/s _____

Dear Sir,

Contract Agreement No. _____
In connection with _____

1. Seven days" notice under Clause 62 of Standard General Conditions of Contract was given to you under this office letter of even no., dated _____; but you have taken no action to commence the work/show adequate progress of the work.
2. You are hereby given 48 hours" notice in terms of Clause 62 of Standard General Conditions of Contract to commence works / to make good the progress of works, failing which and on expiry of this period your above contract will stand rescinded and the work under this contract will be carried out independently without your participation and your Security Deposit shall be forfeited and Performance Guarantee shall also be encased and consequences which may please be noted.

Kindly acknowledge receipt.

Yours faithfully
For and on behalf of the Employer
Name of the Official: -
Stamp/Seal of the Employer

Registered Acknowledgement Due

PROFORMA OF TERMINATION NOTICE

DFCCIL

(Without Prejudice)

No. _____

Dated ____

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

Forty-eight hours (48 hrs.) notice was given to you under this office letter of even no.

Dated _____; but you have taken no action to commence the work/show adequate progress of the work.

Since the period of 48 hours" notice has already expired, the above contract stands rescinded in terms of Clause 62 of Standard General Conditions of Contract and the balance work under this contract will be carried out independently without your participation. Your participation as well as participation of every member/partner in any manner as an individual or a partnership firm/JV is hereby debarred from participation in the tender for executing the balance work and your Security Deposit shall be forfeited and Performance Guarantee shall also be encased.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the Employer

Name of the Official: -

Stamp/Seal of the Employer

SAMPLE

FORMAT OF BANK GUARANTEE FOR MOBILISATION ADVANCE

(Clause 1.5.20, Part - I, Chapter - V)

Bank guarantee made on this..... Between (Hereinafter called "the Bank") of the One Part and Dedicated Freight Corridor Corporation of India Limited. (Hereinafter called "the Employer") of the other Part.

WHEREAS Dedicated Freight Corridor Corporation of India Limited has awarded the Contract no..... for "....." (hereinafter called "the Contractor"), having its registered office at

AND WHEREAS vide Clause 1.5.20 of Part - I, Chapter V, Special Conditions of Contract, Mobilization Advance up to % (percent) of the original contract value of Rs..... Is payable to the contractor against Bank Guarantees, the contractor hereby applies for Mobilization Advance of ___% (percent) amounting to Rs..... /- (Rupees.....) of the Contract Price,

Now, we the undersigned, Bank of, being fully authorized to sign and to incur obligations for and on behalf of and in the name of Bank of hereby declare that the said Bank will guarantee the Employer the full amount of Rs. /- (Rupees.....) as stated above.

We, Bank of, do hereby unconditionally, irrevocably and without demur guarantee and undertake to pay the Employer immediately on demand any or all money payable by the contractor to the extent of Rs. /- (Rupees.....) without any demur, reservation, context, recourse or protest and/or without any reference to the contractor. Any such demand made by the Employer on the Bank shall be conclusive and binding notwithstanding any difference between the Employer and the contractor on any dispute pending before any court, Tribunal, Arbitrator or any other authority. We agree that the guarantee herein contained shall be irrevocable and shall continue to be enforceable till the Employer discharges this guarantee.

This guarantee is valid till

At any time during the period in which this guarantee still valid of the contractor fails to fulfil its obligation under the Contract, it is understood that the Bank will extend this guarantee under the same condition for the required time on demand by the Employer at the cost of the contractor.

The Guarantee hereinbefore contained shall not be affected by any change in the constitution of the Bank or of the contractor.

The neglect or forbearance of the Employer in enforcement of payment of any money, the payment whereof is intended to be hereby secured or the giving of time by the Employer for the payment hereof shall in no way relieve the Bank of their liability under this Deed.

The expressions "the Employer", "the Bank" and "the contractor" hereinbefore used shall include their respective successors and assigns.

Notwithstanding anything contained herein:

Our liability under this Bank Guarantee shall not exceed Rs..... /- (Rupees.....)

This bank Guarantee shall be valid up to.....

We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before (date of expiry of Guarantee).

In witness whereof we of the Bank have signed and sealed this Guarantee on the Day of Being herewith duly authorized.

For and on behalf of the Bank of.....

Signature of Authorized Bank Official

Name
Designation
Stamp/Seal of the bank
Signed, sealed and delivered for and on Behalf of
the bank by the above named

..... In the presence of Witness 1

Signature
Name
Address
Witness 2
Signature
Name
Address

PRE-CONTRACT INTEGRITY PACT**General**

This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on-----day of the month of----- 2023, between, on one hand, the DFCCIL acting through Shri ----- -- Designation of the officer, (hereinafter called the CLIENT, which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part and M/s----- represented by Shri -----Chief Executive Officer (hereinafter called the "BIDDER/SELLER" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second part. WHEREAS the CLIENT proposes to procure (Name of the Stores/Equipment/Item, Name of the Consultancy Service, Name of Works Contract, Name of Services) and the [A] is willing to Offer/has offered for stores or works. WHEREAS the [A] is a private company/ public company/ Government undertaking/ partnership/ registered export agency, constituted in accordance with the relevant law in the matter and the CLIENT is a PSU performing its functions or behalf of the President of India/DFCCIL.

NOW, THEREFOR,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to: -

Enabling the CLIENT to obtain the desired said (Name of the Stores/Equipment/Item, Name of the Consultancy Service, Name of Works Contract, Name of Services) at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure [B] by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the CLIENT will commit to prevent corruption, in any form, by its Officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows: Commitments of the CLIENT

1.1 The CLIENT undertakes that no official of the CLIENT, connected directly or indirectly with the [B], will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the [A] either for themselves or for any person, organization or third party related to the [B], in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the [B].

1.2 The CLIENT will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular [A] in comparison to other BIDDERS.

1.3 All the officials of the CLIENT will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case any such preceding misconduct on the part of such official(s) in reported by the [A] to the CLIENT with full, and verifiable facts and the same is prima facie found to be correct by the CLIENT, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the CLIENT and such a person shall be debarred from further dealings related to the [B] process. In such a case while an enquiry is being conducted by the CLIENT the proceedings under the [B] would not be stalled.

Commitments of BIDDERS

3. The [A] commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post- contract stage) in order to secure the [B] contract or in furtherance to secure it and in particular committee itself to the following: -

3.1 The [A] will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission fees, brokerage or inducement to any official of the CLIENT, connected directly or indirectly with the bidding process, or to any person, organization or

third party related to the [B] in exchange for any advantage in the bidding, evaluation, contracting and implementation of the [B].

3.2 The [A] further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any Material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the CLIENT or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the [B] or any other [B] with the Government for showing or forbearing to show favour or disfavour to any person in relation to the [B] or any other [B] with the Government.

3.3 * [A] shall disclose the name and address of agents and representatives and Indian [A] shall disclose their foreign principals or associates.

3.4 * [A] shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.

3.5 The [A] further confirms and declares to the CLIENT that the [A] is the original manufacturer/ integrator/ authorized government sponsored export entity of the defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the CLIENT or any of its functionaries, whether officially or unofficially to the award of the [B] to the [A] nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

3.6 The [A] either while presenting the bid or during pre-contract negotiations or before signing the [B] shall disclose any payments he has made, is committed to or intends to make to officials of the CLIENT or their family members, agents, brokers or any other intermediaries in connection with the [B] and the details of services agreed upon for such payments.

3.7 The [A] will not collude with other parties interested in the [B] to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the [B].

3.8 The [A] will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

3.9 The [A] shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the CLIENT as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The [A] also undertakes to exercise due and adequate care lest any such information is divulged.

3.10 The [A] commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

3.11 The [A] shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

3.12 If the, [A] or any employee of the [A] or any person acting on behalf of the [A], either directly or indirectly, is a relative of any of the officers of the CLIENT, or alternatively, if any relative of an officer of the CLIENT has financial. Interest/stake in the Bidder's firm, the same shall be disclosed by the [A] at the time of filling of tender.

The term "relative" for this purpose would be as defined in section 6 of the companies act 1956.

3.13 The [A] shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the CLIENT.

4. Previous Transaction

4.1 The [A] declares that no previous transgression occurred in the last three years immediately before signing of this integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any public sector enterprise in India or any Government department in India that could justify BIDDER's from the tender process.

4.2 The [A] agrees that if it makes incorrect statement on this subject, [A] can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

5. Earnest Money (Security Deposit)

5.1 While submitting commercial bid, the [A] shall deposit an amount __ (to be specified in RFP) as Earnest Money/Security Deposit, with the CLIENT through any of the following instruments: -

- i. Bank draft or a pay order in favour of _____.
- ii. A confirmed guarantee by an Indian nationalized bank, promising payment of the guaranteed sum to the CLIENT on demand within three working days without any demur whatsoever and without seeking any reasons whatsoever. The demand for payment by the CLIENT shall be treated as conclusive proof of payment.
- iii. Any other mode or through any other instrument (to be specified in the RFP).

5.2 The earnest money/Security deposit shall be valid up to a period of five years or the contractual obligations to the complete satisfaction of both the BIDDER and the CLIENT, including warranty period, whichever is later.

5.3 In case of the successful [A] a clause would also be incorporated in the article pertaining to performance Guarantee in the [B] that the provisions of sanctions for violation shall be applicable for forfeiture of performance bond in case of a decision by client to forfeit the same without assigning any reason for imposing sanction for violation of this pact.

5.4 No interest shall be payable by CLIENT to the [A] on earnest Money/Security Deposit for the period of its currency.

6. Sanctions for Violations

6.1 Any breach of the aforesaid provisions by the [A] or any one employed by it or acting on its behalf (whether with or without the knowledge of the [A] shall entitle the CLIENT to take all or any one of the following actions, wherever required: -

- (i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the [A]. However, the proceedings with the other BIDDER(s) would continue.
- (ii) The earnest money deposit (in pre-contract stage) and/or security Deposit/performance Bond (after the [B] is signed) shall stand forfeited fully and the CLIENT shall not be required to assign any reason therefore.
- (iii) To immediately cancel the [B], if already signed, without giving any compensation to the [A].
- (iv) To recover all sums already paid by the CLIENT, and in case of an Indian [A] with interest thereon at 2% higher than the prevailing prime lending rate of state bank of India, while in case of a [A] from the country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to [A] from the CLIENT in connection with any other [B], such outstanding payment could also be utilized to recover the aforesaid sum and interest.
- (v) To encash the advance bank guarantee and performance bond, if furnished by the [A], in order to recover the payments, already made by CLIENT, along with interest.
- (vi) To cancel all or any other contracts with the [A]. The [A] shall be liable to pay compensation for any loss or damage to the Client resulting from such cancellation/rescission and the client shall be entitled to deduct the amount so payable from the money(s) due to the [A].
- (vii) To debar the [A] from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the CLIENT.
- (viii) To recover all sums paid in violation of this pact by [A] to any middleman or agent or broker with

a view a view to securing [B] the contract.

(ix) In cases where irrevocable letters of credit have been received in respect of any [B] signed by the client with the [A], They shall not be opened.

(x) Forfeiture of Performance Bond in case of a decision by the client to forfeit the same without assigning any reason for imposing sanction for violation of this pact.

6.2 The client will be entitled to take all or any of the actions mentioned at para 6.1(i) to (x) of this pact also on the commission by the [A] or any one employed by it or acting on its behalf (whether with or without the knowledge of the [A], of an offence as defined in chapter IX of the Indian penal code, 1860 or prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the CLIENT to the effect that a breach of the provisions of this pact has been committed by the [A] shall be final and conclusive on the [A]. However, the [A] can approach the Independent Monitor(s) appointed for the purposes of this Pact.

7. Fall Clause

(i) The [A] undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/system or sub systems way supplied by [A] to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the [A] to the CLIENT, if the [B] has already been concluded.

8. Independent Monitors

8.1 The CLIENT has appointed Independent Monitors (hereinafter referred to as Monitors) for this pact in consultant with the central vigilance commission (Names and addresses of the Monitors to be given)

8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this pact.

8.3 The monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

8.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

8.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the CLIENT

8.6 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the CLIENT including that provided by the BIDOER. The [A] will also grant the Monitor, upon his request and demonstration of a valid Interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be und 'contractual obligation to treat the information and documents of the [A] with confidentiality.

8.7 The client will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

8.8 The monitor will submit a written report to the MD/DFCCIL within 8 to 10 weeks from the date of reference or intimation to him by the CLIENT/BIDDER and, should the occasion arise, submit proposal for correcting problematic situations.

9. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of commission, the CLIENT or its agencies shall be entitled to examine all the documents including the Books of Accounts of the [A] and the [A] shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

9.1 Law and Place of Jurisdiction

This pact is subject to Indian law. The place of performance and jurisdiction is the seat of the CLIENT.

10. Other Legal Actions

The actions stipulated in this integrity pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

10.1 Validity

10.2 The validity of this integrity pact shall be from date of its signing and extend up to 5 years or the complete execution of the [B] to the satisfaction of both the CLIENT and the [A] including warranty period, whichever is later. In case [A] is unsuccessful, this integrity pact shall expire after six months from the date of the signing of the [B].

10.3 Should one or several provisions of this pact turn out to be invalid; the remainder of this pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

11. The parties hereby sign this integrity pact at On

CLIENT
Name of the Officer
Designation
Dept./Ministry/PSU

BIDDER
CHIEF EXECUCITIVE OFFICER

Witness
1. _____
2. _____

Witness
1. _____
2. _____

Note:

[A] - To be replaced by BIDDER/Seller/Consultant/Consultancy firm/Service provider as the case was may be.
[B] - To be replaced by Contract/Supply Contract/Consultancy Contract/Works Contract as the case was may be.

ANTI-PROFITEERING DECLARATION
TO WHOMSOEVER IT MAY CONCERN

I, age, years, Son/Daughter of, resident of Do solemnly affirm and state as under:

- 1) That I am the _____ <Designation of the authorized signatory> of
And I am duly authorized to furnish this undertaking/declaration on behalf of (Name of the company).
- 2) That (Name of the company) has been awarded the work (Name of Work) vide Letter of Award number Dated by M/s Dedicated Freight Corridor Corporation of India Limited.
- 3) That the Company is fully aware of the anti-profiteering provision under the Goods & Services Tax ("GST") Law(s),
- 4) That the Company Has passed the benefit of input tax credit available on the (good/services) having HSN supplied to M/s Dedicated Freight Corridor Corporation of India Limited which it is getting on account of reduced tax liability and input tax credit because of enactment of GST Laws after introduction of Goods and Service Tax w.e.f. 1st July, 2017. The details and amounts being passed on to DFCCIL are provided in Annexure Of this document and are as per applicable GST Laws. These are true and correct to the best of my knowledge, information and belief.
- 5) Further, it is to confirm also that in case..... (name of the_organization) will receive any further benefit in future after 1st July, 2017 by way of availment of input tax credits which were not allowed to be availed before 1st July, 2017 or reduction in tax rates or in any other manner which results in reduction of cost of the goods/services supplied to M/s Dedicated Freight Corridor Corporation of India Limited, then Company will pass that benefit to M/s Dedicated Freight Corridor Corporation of India Limited also.
- 6) That I declare that the foregoing is true and correct and the same is a legal obligation and failure to fulfil it could result in penalties under the law.
- 7) I confirm that I am aware of the implication of the above undertaking and our liability on account of incorrect/misleading declaration under the GST Laws.

Signature of the Authorized signatory/ person

Name and Designation of the Auth. Sign/person of the person

Name of the Organization and Seal

Executed on a non-judicial stamp paper of Rs.300/- duly notarized by notary public

FORMAT FOR CERTIFICATE TO BE SUBMITTED / UPLOADED BY TENDERER ALONGWITH THE TENDER DOCUMENTS

I..... (Name and designation) ** appointed as the attorney/authorized signatory of the tenderer (including its constituents),

M/s.....(hereinafter called the tendered) for the purpose of the Tender documents for the work of as per the tender No..... of(DFCCIL/Railway)**, do hereby solemnly affirm and state on the behalf of the tenderer including its constituents as under:

1. I/we the tenderer (s) am/are signing this document after carefully reading the contents.
2. I/We the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.
3. I/we hereby declare that I/we have downloaded the tender documents from Indian Railway website www.ireps.gov.in
4. I/we have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. In case of any discrepancy noticed at any stage i.e. evaluation of tenders, execution of work or final payment of the contract, the master copy available with the DFCCIL Administration shall be final and binding upon me/us.
5. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
6. I/We also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.
7. I/We declare that the information and documents submitted along with the tender by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.
8. I/we certify that I/we the tenderer(s) is/are not blacklisted or debarred by Railways or any other Ministry /Department of Govt. of India from participation in tender on the date of submission of bids, either in individual capacity or as a HUF/ member of the partnership firm/LLP/N/Society/Trust.
9. I/we understand that if the contents of the certificate submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the Bid Security besides banning of business for a period of up to five years. Further, I/we (insert name of the tenderer) ** _____ and all my/our constituents understand that my/our offer shall be summarily rejected.
10. I/we also understand that if the contents of the certificate submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of Bid Security/Security Deposit and Performance guarantee besides any other action provided in the contract including banning of business for a period of up to five years.
10. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/We are not from such a country or, if from such a country, have been registered with the competent Authority. I/We hereby certify that I/we fulfil all the requirements, in this regard and am/are eligible to be considered (evidence of valid registration by the

competent authority is enclosed)

SEAL AND SIGNATURE OF THE TENDERER

Place:

Dated:

** The contents in Italics are only for guidance purpose. Details as appropriate are to be filled in suitably by tenderer.

This certificate is to be given by each member of JV or Partners of Partnership firm/LLP/etc.

TENDERER'S CREDENTIALS (BID CAPACITY)
DFCCIL

For tenders having advertised value more than Rs 20 crore wherein eligibility criteria includes bid capacity also, the tenderer will be qualified only if its available bid capacity is equal to or more than the total value of the present tender. The available bid capacity shall be calculated as under:

Available Bid Capacity = $[A \times N \times 2] - 0.33 \times N \times B$ Where,

A = Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender), taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of work for which bids has been invited.

B = Existing commitments and balance amount of ongoing works with the tenderer as per the prescribed proforma for statement of all works in progress and also the works which are awarded to tenderer but yet not started up to the date of inviting of tender.

Note:

(a) The Tenderer(s) shall furnish the details of -

- (i) Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender) for calculating A, and
- (ii) Existing commitments and balance amount of ongoing works with tenderer as per the prescribed proforma for statement of all works in progress and also the works which are awarded to tenderer but yet not started up to the date of inviting of tender for calculating B. In case of no works in hand, a 'NIL' statement should be furnished.

The submitted details for (i) and (ii) above should be duly verified by Chartered Accountant.

(b) In case if a bidder is JV, the tenderer(s) must furnish the details of

- (i) Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender) by each member of JV for calculating A, and
- (ii) Existing commitments and balance amount of ongoing works with each member of JV either in individual capacity or as a member of other JV as per the prescribed proforma for statement of all works in progress and also the works which are awarded to each member of JV either in individual capacity or as a member of other JV but yet not started up to the date of inviting of tender for calculating B. In case of no works in hand, a 'NIL' statement should be furnished.

The submitted details for (i) and (ii) above should be duly verified by Chartered Accountant.

(c) Value of a completed work/work in progress/work awarded but yet not started for a Member in an earlier JV shall be reckoned only to the extent of the concerned member's share in that JV for the purpose of satisfying his/her compliance to the above-mentioned bid capacity in the tender under consideration.

(d) The arithmetic sum of individual "bid capacity" of all the members shall be taken as JV's "bid capacity".

(e) In case, the tenderer/s failed to submit the above statement along with offer, their/his offer shall be considered as incomplete and will be rejected **summarily**.

(f) The available bid capacity of tenderer shall be assessed based on the details submitted by the tenderer. In case, the available bid capacity is lesser than estimated cost of work put to tender, his offer shall not be considered even if he has been found eligible in other eligibility criteria/tender requirement.

FORM 23A

PROFORMA OF BID CAPACITY: VALUE OF EXISTING COMMITMENTS**(Railway Board's letter No.2020/CE-I/CT/3E/GCC/Policy Dated 30.12.2020.)**

(Mandatory and applicable for tenders valuing more than Rs 20 Cr to calculate Bid Capacity of tenderer- For value of "B"-Value of existing commitments)

Bidders and each partner of the JV should provide information on their current commitments on all contract that have been awarded, or Letter of Acceptance has been received **up to the date of uploading of tender offer on the website www.ireps.gov.in by the tenderer** or for contracts approaching completion, but for which an unqualified full completion certificate is yet to be issued. **Contract Commitments (for calculating "B" as per the Bid Capacity formula).**

SN	Description of work	Contact No. & date	Name & Address of Employer/ Tel./ Fax/ email	Value of Contract in Rs.	Date of Award of Contract	Date of Completion of Contract
1	2	3	4	5	6	7
1						
2						

Table continued...

Stipulated Period of Completion in Years = $(7-6)/365$	Date of Opening of this tender (Present Tender)	Balance period for Completion of the Work (In years) = $(7-9)/365$	Value of Balance Work as on date of Closing of Tender (Total for calculation of 'B' value of work)	Proportionate Amount of contract to be executed in "N" Years** (For calculation of 'B' Value) Refer Note below.
8	9	10	11	12

Total of all works under Column '12' =**'B' Value (Total of Column '12') =**

"Certified that current commitments on all the contracts that have been awarded or for which a letter of intent or acceptance has been received or for the works in progress or the works approaching completion, value of outstanding work has been indicated in the above table correctly".

Certified by Chartered Accountant

Signed by Tenderer/s

Name:

Name:

Signature with Seal:

Signature with Seal

Note (1) for Column ‘(12)’:

1. In case the balance period for completion of the work (assessed at “**Column 10**”) is less than the period of completion of the present tender, full value of balance work as contained in “**Column 11**” shall be taken in “**Column 12**”.
2. In case the balance period for completion of the work (assessed at “**Column 10**”) is more than the period of completion of the present tender, the proportionate amount to be filled in “**Column 12**” shall be calculated as:

$$\frac{\text{Value of balance work as on date of closing (Value in “Column 11”)}}{\text{Balance period for completion value of (Value in “Column 10”)}} \times N$$

3. N = Number of Years prescribed for completion of works for tender under consideration.

Other Notes: -

- (i) This statement should be submitted with tender/bid/uploaded duly certified/issued by Chartered Accountant and duly signed by the tenderer failing which, the document will be considered as incomplete and offer will be **SUMMARILY REJECTED**.
- (ii) In case of no work in hand, a ‘NIL’ statement should be furnished duly certified/issued by Chartered Accountant and signed by the tenderer.
- (iii) In case of JV firm, the details of works with each member of JV is required to be submitted duly issued by Chartered Accountant and signed by each member of JV.
- (iv) In case, the tenderer failed to submit the above statement along with tender/bid, his offer shall be considered as incomplete and will be rejected summarily.
- (v) ‘N’ for **Column 12**: Number of years prescribed for completion of work for which bid has been invited.
- (vi) ‘B’ Value of existing commitments and balance amount of ongoing works with the tenderer as on date one month prior to the tender closing date to be completed in next ‘N’ years
- (vii) Value of completed Work/ Work in Progress/Work Awarded but yet not started for a Member in an earlier JV shall be reckoned only to the extent of the concerned member ‘s share in the JV for the purpose of satisfying his/her compliance to the above-mentioned technical eligibility criteria in the tender under consideration.
- (viii) The arithmetic sum of individual “Bid’s Capacity” of all the members shall be taken as in JV’s “Bid Capacity”.
- (ix) In case, the tenderer/s failed to submit the above statement along with offer, their/his offer shall be considered as incomplete and will be **rejected summarily**.
- (x) **The available Bid Capacity of tenderer shall be assessed based on the details submitted with tender/bid by the tenderer/bidder. In case, the available Bid Capacity is lesser than estimated cost of work put to tender, his offer shall not be considered even if he has been found eligible in other eligibility criteria/ tender requirement.**

PROFORMA OF BID CAPACITY :CONSTRUCTION TURNOVER

(Mandatory and applicable for tenders valuing more than Rs 20 Cr to calculate Bid Capacity of tenderer- For value of "A"- **Construction Turnover**)

(ON THE LETTER HEAD OF CHARTERED ACCOUNTANT)

To

CGM/MUMBAI SOUTH

DFCCIL

Sub: -Construction works executed and payment received

It is to certify that construction works executed and payment received through construction works of M/s (Name of firm)during the previous three financial years and the current financial year (up to date of inviting tender), as extracted from, Balance sheet/ certificate issued by the employer/ client, Form 16 , Form 26AS etc. are as under :-

Sr. No.	Financial year	Work executed And Payment received through Only construction works	Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year up to date of inviting tender
1.	Current year (Say A-0)		A
2.	A-1		
3.	A-2		
4.	A-3		

Yours sincerely,

Date: ...

(Name & Sign. Of Authorized Signatory)

Seal of firm Registration No /E-Mail/ Fax

Note :

- (a) In case of JV firm details of construction works executed by each member of JV is required to be submitted
- (b) In case, the tenderer/s failed to submit the above statement (for tenders valuing more than 20 Cr) along with offer, their/his offer shall be considered as incomplete and will be rejected summarily.

FORM 23C**PROFORMA OF BID CAPACITY CALCULATION BASED ON ANNEXURE XI & XII
(AxNx2-B)**

Tenderer should Fill up details of “A”(As per annexure XII) , “B”(As per annexure XI) and “N”(As per NIT) and establish the Bid requirement.

A	
Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender), taking into account the completed as well as works in progress.	<i>Fill up Amount “A” certified by Chartered Accountant in Annexure XII</i>
N	
Number of years prescribed for completion of work for which bids has been invited.	<i>Fill up Completion Period As per NIT.</i>
B	
(Value of existing commitments and balance amount of ongoing works with the tenderer as on date one month prior to the tender closing date to be completed in next ‘N’ years.)	<i>Fill up Amount “B” certified by Chartered Accountant in Annexure-XI.</i>
Available Bid Capacity = $[A \times N \times 2] - 0.33 \times N \times B$	<i>Fill up calculated amount as per formula</i> $\{AxNx2\}-0.33xNx B$

**Bid Capacity eligibility criteria will be qualified only if the available bid capacity of tenderer is equal to or more than the total bid value of the present tender.*

SEAL AND SIGNATURE OF THE TENDERER

Dated:

Note: The contents in Italics are only for guidance purpose where the Amount is to filled up. Details as appropriate are to be filled in suitably by tenderer.

FORM No. 24

FINAL SUPPLEMENTARY AGREEMENT

1. Articles of agreement made this day _ in the year between the President of India, acting through the DFCCIL Administration having his office at _ herein after called the DFCCIL of the one part and of the second part.
2. Whereas the party hereto of the second part executed an agreement with the party hereto of the first part being agreement Number _____ dated for the performance _____ herein after called the „Principal Agreement“.
3. And whereas it was agreed by and between the parties hereto that the works would be completed by the party hereto of the second part on _____ date last extended and whereas the party hereto of the second part has executed the work to the entire satisfaction of the party hereto of the first part.
4. And whereas the party hereto of the first part already made payment to the party hereto of the second part diverse sums from time to time aggregating to Rs _____ including the Final Bill bearing voucher No. _____ dated _____ of value _____ duly adjusted as per price variation clause, if applicable (the receipt of which is hereby acknowledged by the party hereto of the second part in full and final settlement of all his /its claims under the principal agreement.

And whereas the party hereto of the second part have received sum of Rs. _____ Through the Final Bill bearing voucher No. _____ dated _____ duly adjusted as per price variation clause (PVC), if applicable (the receipt of which is hereby acknowledged by the party thereto of the second part) from the party hereto of the first part in full and final settlement of all his/its disputed claims under principal agreement.

Now, it is hereby agreed by and between the parties in the consideration of sums already paid by the party hereto of the first part to the party hereto of the second part against all outstanding dues and claims for all works done under the aforesaid principal agreement excluding the security deposit, the party hereto of the second part have no further dues of claims against the party hereto of the first part under the said Principal Agreement. It is further agreed by and between the parties that the party hereto of the second part has accepted the said sums mentioned above in full and final satisfaction of all its dues and claims under the said Principal Agreement.

(Applicable in case Final Supplementary Agreement is signed after release of Final Payment)

Agreement towards Waiver under Section 12(5) and Section 31A (5) of Arbitration and Conciliation (Amendment) Act

I/we..... (Name of agency/Contractor) with reference to agreement no..... raise disputes as to the construction and operation of this contract, or the respective rights and liabilities, withholding of certificate and demand arbitration in respect of following claims:

Brief of claim:

- (i) Claim 1- Detailed at Annexure-
- (ii) Claim 2 –
- (iii) Claim 3 –

I/we..... (post of Engineer) with reference to agreement no..... hereby raise disputes as to the construction and operation of this contract, or the respective rights and liabilities, withholding of certificate and demand arbitration in respect of following claims:

I/we.....do/do not agree to waive off applicability of section 12(5) of Arbitration and Conciliation (Amendment) Act.

Signature of Claimant _____ Signature of Respondent _____

Agreement under Section 31(5)

I/we..... (Name of claimant) with reference to agreement no..... hereby waive off the applicability of sub section 31-A (2) to 31-A (4) of the Arbitration and Conciliation (Amendment) Act. We further agree that the cost of arbitration will be shared by the parties as per Clause 64(6) of the Standard General Conditions of Contract.

Signature of Claimant _____ Signature of Respondent _____

*Strike out whichever not applicable.

(Bid Security)

Bank Guarantee Bond from any scheduled commercial bank of India

(On non-judicial stamp paper, which should be in the name of the Executing Bank)

Name of the Bank: _____

MD DFCCIL

Acting through Chief General Manager,

DFCCIL, Mumbai South

Beneficiary: Dedicated Fright Corridor Corporation of India Limited, Mumbai South

Date: _____

Bank Guarantee Bond No.:

Date: _____

In consideration of the MD DFCCIL acting through Chief General Manager, DFCCIL Mumbai South (***Designation & address of Contract Signing Authority***), DFCCIL, (hereinafter called "The DFCCIL") having invited the bid for _____ through Notice inviting tender (NIT) No. _____, We have been informed that [***Insert name of the Bidder***] (***hereinafter called "the Bidder"***) intends to submit its bid (***hereinafter called "the Bid"***).

WHEREAS, the Bidder is required to furnish Bid Security for the sum of [***Insert required Value of Bid Security***], in the form of Bank Guarantee, according to conditions of Bid.

AND

WHEREAS, [***Insert Name of the Bank***], with its Branch [***Insert Address***] having its Headquarters office at..... [***Insert Address***], hereinafter called the Bank, acting through [***Insert Name and Designation of the authorised persons of the Bank***], have, at the request of the Bidder, agreed to give guarantee for Bid Security as hereinafter contained, in favour of the DFCCIL:

9. KNOW ALL MEN that by these present that I/We the undersigned [*Insert name(s) of authorized representatives of the Bank*], being fully authorized to sign and incur obligations for and on behalf of the Bank, confirm that the Bank, hereby, unconditionally and irrevocably guarantee to pay to the Railway/DFCCIL full amount in the sum of [*Insert required Value of Bid Security*] as above stated.
10. The Bank undertakes to immediately pay on presentation of demand by the Railway/DFCCIL any amount up to and including aforementioned full amount without any demur, reservation or recourse. Any such demand made by the Railway/DFCCIL on the Bank shall be final, conclusive and binding, absolute and unequivocal on the Bank notwithstanding any disputes raised/ pending before any Court, Tribunal, Arbitration or any Authority or any threatened litigation by the Bidder or Bank.
11. The Bank shall pay the amount as demanded immediately on presentation of the demand by Railway/DFCCIL without any reference to the Bidder and without the Railway/DFCCIL being required to show grounds or give reasons for its demand of the amount so demanded.
12. The guarantee hereinbefore shall not be affected by any change in the constitution of the Bank or in the constitution of the Bidder.
13. The Bank agrees that no change, addition, modifications to the terms of the Bid document or to any documents, which have been or may be made between the Railway/DFCCIL and the Bidder, will in any way absolve the Bank from the liability under this guarantee; and the Bank, hereby, waives any requirement for notice of any such change, addition or modification made by Railway/DFCCIL at any time.
14. This guarantee will remain valid and effective from..... [*insert date of issue*] till [*insert date, which should be minimum 90 days beyond the expiry of validity of Bid*]. Any demand in respect of this Guarantee should reach the Bank within the validity period of Bid Security.
15. The Bank Guarantee is unconditional and irrevocable.
16. The expressions Bank and Railway/DFCCIL herein before used shall include their respective successors and assigns.
17. The Bank hereby undertakes not to revoke the guarantee during its currency, except with the previous consent in writing of the Railway/DFCCIL. This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No.758.
18. The Bank hereby confirms that it is on the SFMS (Structured Financial Messaging System) and shall invariably send the advice of this Bank Guarantee to the following bank details –

IFSC CODE	
IFSC TYPE	
BANK NAME	
BRANCH NAME	
CITY NAME	
ADDRESS	
DISTRICT	
STATE	
BG ENABLED	

19. The Guarantee shall be valid in addition to and without prejudice to any other security Guarantee(s) of Bidder in favour of the Railway/DFCCIL. The Bank, under this Guarantee, shall be deemed as Principal Debtor of the Railway.

Date

Place..... Bank's Seal and authorized signature(s)

[Name in Block letters]
[Designation with Code No.]
[P/Attorney] No.

Witness:

1 Signature, Name & Address & Seal

2 Signature, Name& address & Seal

Bank's Seal
[P/Attorney] No.

Note: All italicized text is for guidance on how to prepare this bank guarantee and shall be deleted from the final document.

Form No. 27 A

(Reference Clause 40(A))

Registered Acknowledgement Due

PROFORMA OF 14 DAYS NOTICE FOR OFFLOADING OF PART OF CONTRACT

WORK

DFCCIL RAILWAY

(Without Prejudice)

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

In spite of repeated instructions to you by the subordinate offices as well as by this office through various letters of even no. _____, dated _____; you have failed to show adequate progress of work so as to complete the contract within the original / extended date of completion of contract and part(s) of contract work are yet to be started/ still lagging behind the agreed program of work, listed as under:

(Details of part(s) of work which is delayed and can be executed independently, to be mentioned).

2. Your attention is invited to this office/Chief Engineer's office letter no. _____, dated _____ in reference to your representation, dated _____.

3. As you have failed to abide by the instructions issued to commence the work /to show

adequate progress of work, you are hereby given 14 days' notice in accordance with Clause 40A of the Standard General Conditions of Contract to deploy adequate resources i.e. (the details of resource requirement, to be mentioned) and commence / to make good the progress for part(s) of works detailed above, failing which action

Signature of tenderer (S)

as provided in Clause 40A of the Standard General Conditions of Contract shall be commenced after expiry of 14 days' notice period viz. to offload few/ all part(s) of work mentioned above to any of the existing or new contractor without your participation and at your Risk & Cost, not exceeding the value of Performance Guarantee of this contract, which may please be noted.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the DFCCIL

Form No. 27 B

(Reference Clause 40(A))

Registered Acknowledgement Due

NOTICE FOR PART OF CONTRACT WORK OFFLOADED

DFCCIL RAILWAY

(Without Prejudice)

To

M/s _____

Dear Sir,

Contract Agreement No. _____

In connection with _____

1. Fourteen days' notice under Clause 40A of the Standard General Conditions of Contract was given to you under this office letter of even no., dated _____; but you have taken no/inadequate action to deploy adequate resources to commence the part(s) of work/show adequate progress of the part(s) of work, mentioned therein.

As you have failed to abide by the instructions issued to commence the part(s) of work/show adequate progress of the part(s) of work even at the lapse of 14 days' notice period under Clause 40A of the Standard General Conditions of Contract, few part(s) of the work under the contract have been offloaded and being executed by other mode(s) at the cost detailed below:

Or,

1. Please refer your request letter no.... dated, wherein it was requested under clause 40 A of the Standard General Conditions of Contract to offload part(s) of works at your risk & cost. The details of part(s) of the work under the contract which have been offloaded and being executed by other mode(s) at the cost detailed below:

(List of Part(s) of work offloaded, Details of mode of execution of such offloaded work along with approximate cost thereof to be mentioned)

2. The final measurement of work(s) already executed for above part(s) of work recorded as per clause 45 (A) or/and 45 (B) of the Standard General Conditions of Contract is enclosed herewith.

3. The Bill(s) of Quantities for Part(s) of work offloaded is enclosed herewith.

4. The additional cost in execution of offloaded work through mode(s) mentioned in para (1) above is determined as Rs. _____, over& above the cost of execution under this contract (including the PVC amount payable as per contract, as on the date of issue of this notice). This additional cost shall be recovered from your next on account bill(s) or any other dues payable to you under contract.

5. The Contract value gets reduced to Rs.....

6. You are requested to continue with the balance work in the contract subsequent to offloading of above part(s) of work.

Kindly acknowledge receipt.

Yours faithfully

For and on behalf of the DFCCIL

MOU- ELECTRICAL WORK

(To be executed on non-judicial stamp paper of the appropriate value)

The Memorandum of Understanding (M.O.U) made & entered with this **(date)**. between. **(Name of tenderer with address)**

.....

AND

(Name of Electrical License holder party with address)

.....

This indenture witnessed as follows:

Whereas **(Name of tenderer)** has a considerable experience in Civil work like as **(Building, drainage etc.)**

Whereas **(Name of Electrical License holder party)** contained considerable experience in Electrical works.

And whereas Chief General Manager, Mumbai South OF DFCCIL, as have invite Tender for **(Name of work)** in connection with Sanctioned work.

And where as in response to above tender invite by DFCCIL, both the party have expressed their desire to from consortium to submit competitive bid & execute this work in the event of award of this contract to **(Name of tenderer)** by DFCCIL, the intend being that **(Name of tenderer)** will act as the prime bidder and **(Name of Electrical License holder party)** will participate as an associate of **(Name of tenderer)**

And where the purpose of present understanding is to set out the relation between the parties both during tendering and negotiation phase and also during the phase of execution of work on the basis of term and condition mutually agreed upon between the two parties.

And whereas parties agree to convert this memorandum of understanding in to formal agreement in due course of time incorporating the details of terms & condition etc. as mutually agreed upon.

The parties further agree as follows:

The nature of MOU is that of temporary working arrangement for the purpose of submission of bid as well as subsequent execution of work as per the respective scope work spelt out here after.

Signature of **(tenderer party) with seal**

Place:

Date:

Signature of **(Electrical License holder with seal)**

FORM No. 29

SUMMARY OF INSURANCES**(Clause 1.5.12, Part - I, Chapter - V)****Insurance to be taken by the Contractor**

In accordance with the provision of SCC Sub-Clause 1.5.12, the Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the insurance set for the below in the sums and with the deductibles and other conditions specified. The identity of the insurers and the form of the policies shall be subject to the approval of the Employer, such approval not to be unreasonably withheld.

A. Insurance against Injuries to Person and Damage to property-

Covering any loss, damage, death or bodily injuries which may occur to any physical property or to any person / animal covering loss and damage to Employer property and Employer's personal.

Amount (In Rs)	Deductible limits (in Rs.)	Parties insured (names)	From	To
Rs. 100 Lakh per occurrence with no limit on the number occurrences	-	Contractor and Employer	Commencement date	Issue of Performance certificate

B. Insurance of Works and Contractor's equipment-

The contractor shall insure to cover loss or damage to works, plants, materials and contractor's documents occurring prior to completion of the work until the date of issue of the Taking-Over Certificate for the Works.

Amount (In Rs)	Deductible limits (in Rs.)	Parties insured (names)	From	To
Full replacement value, including delivery to Site plus 15% of replacement cost	-	Contractor and Employer	Commencement date	Issue of Taking-Over Certificate for the Works

C. Insurance for Contractor's Personnel

The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractor's Personnel. The Employer and the Engineer shall also be indemnified under the policy of insurance, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.

D. Automobile Liability Insurance

Covering use of all vehicles used by the contractor or its sub contractors (whether or not owned by them) in connection with the design, construction testing and commissioning of the facilities under the contract in accordance with statutory requirements.

E. Professional Indemnity Insurance

To cover professional negligence in the design of the works.

Amount (In Rs)	Deductible limits (in Rs.)	Parties insured (names)	From	To
Rs. 50 Lakh	-	Contractor and Employer	Commencement date	Issue of Performance certificate plus 3 years

F. Workers' Compensation

In accordance with the statutory requirement applicable in India.

G. Insurance to be taken by the Employer (DFCCIL)– Nil

FORM No. 30

**FORMAT FOR AFFIDAVIT TO BE UPLOADED BY TENDERER ALONG WITH
THE TENDER DOCUMENT****(Clause 1.3.13.7, Part - I, Chapter - III)**

(To be executed in presence of Public notary on non-judicial stamp paper of the value of Rs. 100/- The stamp paper has to be in the name of the tenderer)**

Tender Notice No.....

Name of Work:.....

I (Name and designation)** appointed as the attorney/authorized signatory of the tenderer (including its constituents),

M/s(hereinafter called the tenderer) for the purpose of the Tender documents for the work ofas per the tender No of DFCCIL, do hereby solemnly affirm and state on the behalf of the tenderer including its constituents as under:

1. I/we the tenderer(s), am/are signing this document after carefully reading the contents.
2. I/we the tenderer(s) also accept all the conditions of the tender and have signed all the pages in confirmation thereof.
3. I/we hereby declare that I/we have downloaded the tender document including all amendments/corrigendum from the website <https://www.ireps.gov.in>. I/we have verified the content of the document from the website and there is no addition, no deletion or no alteration to the content of the tender document. In case of any discrepancy noticed at any stage i.e evolution of tenders, execution of work of final payment of the contract, the master copy available with the DFCCIL shall be final and binding up me/us.
4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. **I/we also understand that my/our offer will be evaluated based on the document/credentials submitted along with the offer and same shall be binding upon me/us.**
6. **I/we declare that the information and documents submitted along with the tender by me/us are correct and I/we are fully responsible for the correctness for the information and documents, submitted by us.**
7. I/we certify that I/we the tenderer(s) is/are not blacklisted or debarred by DFCCIL/Railways or any other Ministry / Department of Govt. of India from participation in tender on the date of submission of bids, either in individual capacity or as a HUF/ member of the partnership firm/LLP/JV/Society/Trust.
8. I/we understand that if the contents of the certificate submitted by us are found to be forged/false or incorrect at any time during process for evaluation of tenders, it shall lead to forfeiture of the Bid Security besides banning of business for a period of upto Two years. Further, I/we (insert name of the tenderer) ** _____ and all my/our constituents understand that my/our offer shall be summarily rejected.
9. I/we also understand that if the contents of the certificate submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of Bid Security/Security Deposit and Performance

guarantee and may also lead to any other action provided in the contract including banning of business for a period of upto Two years.

10. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/We are not from such a country or, if from such a country, have been registered with the competent Authority. I/We hereby certify that I/we fulfil all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed)

Place:

Dated:

DEPONENT

SEAL AND SIGNATURE OF
THE TENDERER

VERIFICATION

I/we above named tenderer do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT

SEAL AND SIGNATURE
OF THE TENDERER

Place:

Dated:

***The contents in Italics are only for guidance purpose. Details as appropriate, are to be filled in suitably by tenderer.*

Attestation before Magistrate/Notary Public

Form No. 31

(This certificate is to be given by attorney/authorized signatory/each member of Partnership firm/Joint venture (JV) / Hindu Undivided Family (HUF) / Limited Liability Partnership (LLP) etc.)

- 1) I/We.....(Name), attorney/authorized signatory of the..... (Constituent firm/constituent partner) and member/partner of the(tenderizing firm) hereby solemnly affirm and state as under:
- 2) 1. I/we certify that(constituent firm/constituent partner) is/are not blacklisted or debarred by Railways or any other Ministry / Department of Govt. of India from participation in tender on the date of submission of bids, either in individual capacity or as a HUF/ member of the partnership firm/LLP/JV/Society/Trust.
- 3) 2. I/We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India and certify that I am/we are not from such a country or, if from such a country, have been registered with the competent Authority. I/we hereby certify that I/we fulfil all the requirements in this regard and am/are eligible to be considered (evidence of valid registration by the competent authority is enclosed),

SEAL AND SIGNATURE
OF THE CONSTITUENT FIRM /CONSTITUENT PARTNER

Place:

Dated:

DETAILS OF PLANT AND MACHINERY ALREADY AVAILABLE WITH THE FIRM

SN	Particulars of equipment	No. of Unit.	Kind & make	Capacity	Date by which the plant would be available for use on this work	Age & condition	Work on which it is being used.	Proposed to be purchased	
								Date of placing order	Likely date of receipt
	1	2	3	4	5	6	7	8	9
1									
2									

Note:

1. Indicate clearly, whether (i) Owned by firm, or (ii) To be purchased by firm giving date of placing order and likely date of receipt.
2. Optimum Plants and Machineries required to be deployed during execution of work.
3. Earthwork in formation of New Line / Doubling/ Gauge Conversion Project: Poclain, JCB, Vibratory Roller, Grader, Dumpers, Tractors, Water tank etc.
4. Concreting work for bridge work: Concrete pump, Transit mixer as per requirement, Batching plant of suitable capacity, JCB, Needle vibrator 60/40mm etc.

Signature.....

Name & Designation.....

(In Capital)

Address.....

Date.....

LIST OF ENGINEERS/PERSONNEL ALREADY AVAILABLE/ PROPOSED TO BE EMPLOYED FOR DEPLOYMENT ON THIS WORK

SN	Name & Designation	Qualification	Professional experience	Organization with whom working	Date by which personnel will be available for this work.
	1	2	3	4	5
1					
2					

Signature.....
Name & Designation.....
(In Capital)
Address.....

Date.....

Certificate of No Relative being an Employee of DFCCIL

I/We, the Under Signed hereby solemnly declare and certify that I/We do not have any of our Relative/ Relatives Employed in In the DFCCIL (Engineering Department) except the names mentioned Herein Under:

SN	Name of Relative employed in DFCCIL	Designation	Name of Office	Headquarter where relative is posted

Note: Names, Designation, Name of Office, headquarter of the tenderer's relative in **DFCCIL** (Engineering Department) to be mentioned by the tenderer as per above table.

Signature.....

Name & Designation.....

(In Capital)

Address.....

Date.....

Appendix-1CHECKLIST FOR TENDERER

1) Uploading of Tender Form – 1 (Offer Letter)	Form 1
2) Uploading of Tender Form for General information of the Tenderer	Form 2C
3) Uploading of Tender Form for Power of Attorney	Form 12 A or 12 B as applicable
4) Uploading of Tender Form in support of Technical Eligibility	Form 2A
5) Uploading of Completion certificates of all Similar nature work	Form 2AA
6) Uploading of Tender Form in support of Financial Eligibility	Form 2B
7) Bid Security Bank Guarantee Bond Format from any scheduled commercial bank of India.	Form 26
10) Uploading of Bid Capacity Supporting Documents (when tender value is more than Rs.20 Crore) (i) Proforma Of Bid Capacity-Value Of Existing Commitments , (ii) Proforma Of Bid Capacity (Construction Turnover) &(iii) Proforma Of Bid Capacity Calculation	Form 23 A, B & C
11) Uploading of Documents for Eligibility in case of constitution of firm by the Sole Proprietor Firm/ Partnership firm/ JV/ Society/ Companies / HUF etc. as prescribed in Para 1.3.6. (if applicable).	
12) Uploading of MOU for Joint Venture Agreement	Form 9
18) Uploading of Certificate as per Annexure–V of IRSGCC-2020.	Form 22, Form 30
19) Any other documents related to tendered work	

Note: In addition to above, any other documents required as per Tender Document (all documents uploaded with tender notice) shall also be submitted/uploaded by the tenderer/bidder.

PART V

DRAWINGS

DRAWINGS

The drawings of the items of tender are attached on IREPS site.

END OF DOCUMENT
