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DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED

(A GOVERNMENT OF INDIA ENTERPRISE)

under

MINISTRY OF RAILWAYS

COUNTRY: **INDIA**

TENDER NOTICE NO. MGS/EN/LC-RUB/02/2013/02
(Two Packet System)

NAME OF WORK

CONSTRUCTION OF 07 NOS . RUB/LHS IN LIUE OF LC NO. 44 (Km 576/11-13), 48 (Km 585/1-3), 51 (Km 590/23-25),52 (Km 594/17-19),54 (Km 603/17-19), 57 (Km 612/25-27)AND 58 (Km 615/5-7) IN BETWEEN DURGAWATI - KARWANDIYA STATION OF SONNAGAR—MUGHALSARAI SECTION. WITH PRECAST RCC BOX SEGMENTS BELOW DFC TRACK

TWO PACKET OPEN TENDER

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Part-I

Technical Bid document

Note –

1. After completing the tender documents Part-I, it should be separately sealed in an envelopes super scribed as **Packet-I (Technical Bid)** along with name of work and Tender no**..**
2. The **part-II** of tender document should be separately sealed in another envelop super scribed as **Packet-II (Price Bid)** along with name of work and Tender No.
3. These two envelopes should be sealed in a larger envelope super scribing the name of work & Tender No.
4. The bidder shall prepare and submit two copies of the bid duly marked as
   (i) Original
   (ii) Copy

DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED
A GOVERNMENT OF INDIA ENTERPRISE

TENDER NOTICE NO. MGS/EN/LC-RUB/2013/02

Declaration

I/We have downloaded the tender document from the internet site www.dfccil.org and I/We have not tampered/modified the document in any manner. In case, if the same is found to be tampered/modified, I/We understand that my/our tender will be summarily rejected and full Bid Security deposit will be forfeited and in case the same is detected after awarding the work, the contract will be terminated.

I/We submitting a demand draft no. _____ dated _____ issued by _____ for Rs. 10,000 (Rs Ten Thousand only) towards the cost of tender document as per Tender Notice No. MGS/EN/LC-RUB/2013/02 in favour of "Dedicated Freight Corridor Corporation of India Ltd., New Delhi" in original form.

_____
Signature of Tenderer (s)

Name : _____

Date : _____

Address _____

_____

Phone/Mobile/No._____

FAX No. _____

DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED
A GOVERNMENT OF INDIA ENTERPRISE

TENDER NOTICE NO. MGS/EN/LC-RUB/2013/02

TENDER FORMS (FIRST SHEET)

Name of work :- CONSTRUCTION OF 07 NOS . RUB/LHS IN LIUE OF LC NO. 44 (Km 576/11-13), 48 (Km 585/1-3), 51 (Km 590/23-25),52 (Km 594/17-19),54 (Km 603/17-19), 57 (Km 612/25-27)AND 58 (Km 615/5-7) IN BETWEEN DURGAWATI - KARWANDIYA STATION OF SONNAGAR-MUGHALSARAI SECTION. WITH PRECAST RCC BOX EGMENTS BELOW DFC TRACK

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To,
……
……..,
Acting through

DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED

I/We…….. have read the various conditions to tender attached here to and agree to abide by the said conditions. I/We also agree to keep this tender open for acceptance for a period of **120 (One hundred twenty)** days from the date fixed for opening the same 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 schedule and hereby bind myself/our selves to complete the work in all respects within **18(EIGHTEEN) months** from the date of issue of letter of acceptance of the tender.

(2) I/We also hereby agree to abide by the General Conditions of Contract corrected up to date of issue of Tender Notice.and to carry out the work according to the Special Conditions of Contract and Specifications of materials and works as laid down by DFCCIL, in the annexed Special Conditions / Specifications corrected up to date of issue of Tender Notice for the present contract.

(3) A sum of **Rs. 13,62,200/-** is herewith forwarded as **Bid Security**. The full value of the Bid Security shall stand forfeited without prejudice to any other right or remedies in case my/our Tender as accepted and if :-

(a) 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

(b) I/We do not commence the work within fifteen days after receipt of orders to that effect.

(4) Untill a formal agreement is prepared and executed acceptance of this tender shall constitute a binding contract between us subject to modification , 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. ……

2. ……

_____
Signature of Tenderer (s)

Dt. ----------

Address of the Tenderer(s)

DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED
A GOVERNMENT OF INDIA ENTERPRISE

TENDER FORMS (SECOND SHEET)

1. Instructions to tenderers and conditions of tender : The following documents form part of Tender/Contract :-

   (a) Tender Forms – First sheet and Second Sheet.
   (b) Special Conditions/Specifications (enclosed).
   (c) Schedule of approximate quantities (enclosed).
   (d) General conditions of contract and Standard specifications for materials and works as laid down in Indian Railways General condition of contract and East Central Railway's Standard specification for material and works , as amended / corrected up to date of issue of Tender Notice, copies of which can be seen in the office of Chief Project Manager / DFCCIL / Mughalsarai or obtained from the office of the Divisional Railway Manager / East Central Railway / Mughalsarai or Office of the General Manager / East Central Railway / Hazipur on Payment as specified by East Central Railway.
   (e) Unified Standard Schedule of Rates of East Central Railway as amended/corrected up to date, copies of which can be seen in the office of Chief Project Manager / DFCCIL / Mughalsarai. or obtained from the office of the Divisional Railway Manager / East Central Railway / Mughalsarai or Office of the General Manager / East Central Railway / Hazipur on Payment as specified by East Central Railway.
   (f) Preliminary / General Arrangement Drawings of the work.

2. Drawing for the work – The preliminary drawings for the work can also be seen in the office of the Chief Project Manager / DFCCIL / Mughalsarai or obtained from the office of the Chief Project Manager / DFCCIL / Mughalsarai at any time during the office hours. The drawings are only for the guidance of Tenderer(s). Data based, working drawings along with design calculations confirming to DFC Loading, based generally on the drawing mentioned above, will be prepared by the contractor and after proof check from IIT-BHU/ Kanpur/ Delhi / Roorkee / Kharagpur or MNIT/Allahabad or NIT / Patna the same will be submitted to DFCCIL for approval.

3. The Tenderer(s) shall quote his/their rates as a percentage above or at par or below the schedule of rates as mentioned in Schedule A (ECR USSOR Items), Schedule B (ECR USSOR Other items except mentioned in Schedule A) and Schedule C (NS Items) of Schedule of approximate Quantities enclosed with this tender document, except where he/they are required to quote item rates. Tenderer must quote their rate for all the items shown in the schedule of approximate quantities attached in the manner described above. The quantities 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.

4. Tenders containing erasures and/or alterations of the Tender documents are liable to be rejected. Any correction made by Tenderer (s) in his/their entries must be attested by him/them.

5. The works are required to be completed within **18 (EIGHTEEN) Months** from the date of issue of acceptance letter.

6. **Bid Security** – (a) The tender must be accompanied by a sum of **Rs 13,62,200/-** as Bid Security in the shape of a **FDR (Fixed deposit receipt) / Demand Draft**, failing which the tender will not be considered. Bid Security should be drawn in favour of **"Dedicated Freight Corridor Corporation of India Ltd., New Delhi"** from SBI/Nationalized /Scheduled Bank of India in original form. The **validity of FDR should not be less than 180 days**.

(a) The tenderer(s) shall keep the offer open for a minimum period of **120 (One hundred twenty)** days from the date of opening of the Tender. It is understood that the tender documents has been sold/permitted to tender is 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. If the Tenderer fail to observe or comply with the foregoing stipulation, the amount deposited as Bid Security for the due performance of the above stipulation shall be forfeited by the DFCCIL.

(b) If the tender is accepted, the amount of Bid Security will be retained and adjusted as Security Deposit of the due and faithful fulfillment of the contract. This amount of security deposit shall be forfeited if the tenderer(s) contractor(s) fail to execute the Agreement Bond within 7 days after receipt of notice issued by Railway that such documents are ready or to commence the work within 15 days after receipt of the orders to that effect.

(c) The Bid Security of the unsuccessful tenderer(s) will save as herein before provided, be returned to the unsuccessful tenderer(s) within a reasonable time but the DFCCIL shall not be responsible for any loss or depreciation that may happen to the Security for the due performance of the stipulation to keep the offer open for the period specified in the tender documents or to the Bid Security while in their possession nor be liable to pay interest thereon.

7. Rights of the DFCCIL to deal with tender – 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 no tenderers(s) shall demand neither 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.

8. 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.

9. If the tenderer(s) expires after the submission of his / their tender or after the acceptance of his / their tender, 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.

10. Income Tax clearance certificate – The tenderer (s) is/are required to produce alongwith his/their tender an authorized copy of the income-tax clearance Certificate or a sworn affidavit/duly countersigned by the Income-Tax Officer of the effect that he has/ they have no taxable income.

11. Tenderer(s) Credentials :- Documents testifying tenderer's previous experience and financial status should be produced along with the tender or when desired by competent authority of the DFCCIL

Tenderer(s) who has/have not carried out any work so far on DFCCIL ,should submit along with his/their tender credentials to establish.

(i) His capacity to carry out the works satisfactorily.

(ii) His financial status supported by bank reference and other documents.

(iii) Certificates duly attested and testimonials regarding contracting experience for the type of job for which tender is invited with list of works carried out in the past.

12. (1). **The Technical Eligibility Criteria will be as under:**

1.1 The tenderer(s) should have completed at least one similar single work for a minimum value of **35% of advertised tender value of work.**

Note: (i) Similar nature of works physically completed within the qualifying period, i.e. the last 3 financial years and current financial year (even though the work might have commenced before the qualifying period) should only be considered in evaluating the eligibility criteria.

(ii) The total value of similar nature of work completed during the qualifying period, and not the payments received within qualifying period alone, should be considered.

(iii) In the case of composite works involving combination of different works, even separate completed works of required value should be considered while evaluating the eligibility criteria.

(iv) **Similar Nature of works for this Tender will be "Any Minor/Major Bridge works involving Concrete works" only.**

1.2 Total contract amount received during the last three years (i.e. current year and three previous financial years) should be minimum of **150% of advertised tender value** of work supported by (a) Authenticated payment record of Any Railway or any other Government Department or PSU's etc. (b) Audited Financial Statement certified by Chartered Accountant.

1.3 Certificate from private individuals/firms for whom such works are executed/being executed shall not be considered.

(2) **Financial Eligibility Criteria**:

1.1 As a proof of sufficient financial capacity and organizational resources, contractor should have received the total payments against **satisfactory execution of all completed/on going works of all types** (not confined to only similar works) **during the last three financial years and in the current financial year** (Up to the date of opening of tender) of a value not less than **150% of the advertised cost of work** including the cost of cement & steel.

1.2 The complete tender document consists of two parts i.e. **Part-I (Technical Bid document) & Part-II (Price Bid document).** After completing the tender documents they should be separately sealed in two different envelopes super scribed as **Packet-I (Technical Bid) and Packet-II (Price Bid)** along with name of work, the Tender No. and these two envelopes should be sealed in a larger envelope super scribing the name of work & Tender No. The Part-I & Part-II of the bid i.e. Technical Bid & Price Bid shall be hard bound (separately) and all pages serial numbered. (Hardbound implies such binding between two covers through striching or otherwise whereby it may not be possible to replace any paper without disturbing the document.). **All the quoted rates and the amount in Part-II (Price Bid) shall be laminated by the tenderer**. **The bidder shall prepare and submit two copies of the bid duly marked as**

(i) Original

(ii) Copy

13. Tender Form can be downloaded from the official website of Dedicated Freight Corridor Corporation of India limited – www.dfcil.org or it can be purchased on cash payment of Rs 10,000 from following offices during working hours up to **13.00 hrs. of 09-10-2013**.

(i) **Office of The Chief Project Manager, DFCCIL, Mughalsarai, Shyama Kunj, Plot no 122/1, Dafi, Narainpur by pass, Post- Nayapura, District-Varanasi. Phone- 09235**442648.

(ii) **Office of The Chief Project Manager /DFCCIL / Allahabad (East), old GM/NCR office, Balmiki Chauraha , Nawab Yusuf Road, Allahabad. Phone 0532- 2560326**

(iii) **Corporate Office, Dedicated Freight Corridor Corporation of India Limited, Pragati Maidan Delhi Metro Station Complex, New Delhi- 110001. Phone 011-23454669.**

Tender form downloaded from the web site should be submitted alongwith the demand draft of Rs 10,000/- in favour "Dedicated Freight Corridor Corporation of India Ltd., New Delhi" from SBI/Nationalized /Scheduled Bank of India in original form otherwise the tender will be summarily rejected.

14 Tender must be submitted in a sealed cover with superscribed **Tender No.** and must be sent by Registered post to the address of **Office of the Chief Project Manager, Mughalsarai, Shyama**

Kunj, Plot no 122/1, Dafi, Narainpur by pass, Post- Nayapura, District- Varanasi so as to reach his office not later than **13.00** hours on the date **09-10-2013** or deposited in the special box allotted for the purpose in the **Corporate Office, Dedicated Freight Corridor Corporation of India Limited, Pragati Maidan Delhi Metro Station Complex, New Delhi- 110001. Phone 011-23454669.** This special box will be sealed at **13.00 hrs on 27-08-2013**. The tender (Technical bid) will be opened at **15.00 hrs. on 10-10-2013.** in the **Corporate Office, Dedicated Freight Corridor Corporation of India Limited, Pragati Maidan Delhi Metro Station Complex, New Delhi- 110001.** The tender papers will not be sold after **13.00 hrs. of date 09-10-2013.**

15. **Part-I (Technical Bid)** will be opened on **10-10-2013 at 15.00** hours at **Corporate Office, Dedicated Freight Corridor Corporation of India Limited, Pragati Maidan Delhi Metro Station Complex, New Delhi- 110001**. The opening of **Part-II (Price Bid)** of the qualified bidders will be intimated later on. If the last date of receiving/opening happens to be Bundh/Holiday(s), the tenders will be issued/received/opened on the next working day as per same timings.

16. DFCCIL will not be responsible for any delay/difficulties /inaccessibility of the down loading facility for any reason whatsoever. In case of any discrepancy between the tender documents downloaded from internet and the master copy available in the offices mentioned in **(13)** above, the latter shall prevail and will be binding on the tenderer(s). No claim on this account will be entertained.

17. Non-compliance with any of the conditions setforth there in above is liable to result in the tender being rejected.

14. Execution of Contract Document - The successful Tenderer(s) shall be required to execute an agreement with the President of India acting through the DFCCIL for carrying out the work according to General conditions of Contract, Special conditions / specifications annexed to the tender and specification for work and materials of East Central Railway as amended/corrected up to date of as mentioned in tender form (First Sheet).

15. **Partnership deeds, power of attorney etc**. The tenderer shall specify whether the tender is submitted on his own or on behalf of a partnership concern. If the tender is submitted on behalf of a partnership concern, he should submit the certified copy of partnership deed along with the tender and authorization to sign the tender documents on behalf of partnership firm. If there documents are not enclosed along with tender documents, the tender will be treated as having been submitted by individual signing the tender documents. The DFCCIL will not be bound by any power of attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. It may, however recognize such power of attorney, and charges after obtaining proper legal advice, the cost of which will be chargeable to the contractor.

16. The tenderer whether sole proprietor, a limited company or a partnership firm if they want to act through agent or individual partner(s) should submit along with the tender or at a later stage a power of attorney duly stamped and authenticated by Notary Public or by Magistrate in favour of the specific person whether he/they be partners the firm or

any other person specifically authorizing him/them to submit the tender, sign the agreement, receive money, witness measurements, sign measurement books, compromise, settle, relinquish any claim(s) preferred by the firm and sign "No claim Certificate" and refer all or any disputes to arbitration.

17. (a) Employment/Partnership etc. of retired DFCCIL Employees :- (a) Should a tender be a retired Engineer of the Gazetted rank or any other Gazettee officer working before his retirement, whether in the executive or administrative capacity, or whether holding a pensionable post or not in the DFCCIL owned and administered by the President of India of for the time being, or should a tenderer being partnership firm have as one of its partners a retired Gazetted Officer as one of its Directors or should a tenderer have in his employment any retired Gazetted Officer have in his employment any retired Gazetted officer as aforesaid, the full information as to the date of retirement of such Gazetted officer from the said service and in case where such officer had not retired from Government service at least 2 years prior to the date of submission of the tender 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 or to take the employment under the contractor, has been obtained by the tenderer or officer as the case may be from the President of India or any Officer, duly authorized by him in this behalf, shall be clearly stated in writing at the time of submitting the tender. Tenderer without the information above referred to or a statement to the effect that no such retired Gazetted Officer is so associated with tenderer, as the case may be, shall be rejected.

(b) Should a tenderer or contractor being an individual on the list of approved contractors, have a relative(s) or in the case of partnership firm or company of contractors one or more of his share holder(s) or a relative or the share holder(s) employed in gazetted capacity in the DFCCIL, the authority inviting tenders shall be informed of the fact at the time of submission of tender (in specified Performa enclosed as Annexure V of this tender document), failing which the tender may be rescinded in accordance with the provision of the General Conditions of Contract.

Chief Project Manager
Dedicated Freight Corridor Corporation of India Limited
Mughalsarai

DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED
A GOVERNMENT OF INDIA ENTERPRISE

TENDER NOTICE NO. MGS/EN/LC-RUB/2013/02

Name of work :- CONSTRUCTION OF 07 NOS . RUB/LHS IN LIUE OF LC NO. 44 (Km 576/11-13), 48 (Km 585/1-3), 51 (Km 590/23-25),52 (Km 594/17-19),54 (Km 603/17-19), 57 (Km 612/25-27)AND 58 (Km 615/5-7) IN BETWEEN DURGAWATI - KARWANDIYA STATION OF SONNAGAR-MUGHALSARAI SECTION. WITH PRECAST RCC BOX EGMENTS BELOW DFC TRACK

Sl. No.	Description of work	Amount at par with schedule as per Schedule of Quantities	Percentage(%) above/below/at par	Amount
1	Percentage above or below on the items of Annexure - A.	Rs 5,64,13,017.62	Rate to be quoted in Price Bid Document	Rate to be quoted in Price Bid Document
2	Percentage above or below on the items of Annexure - B.	Rs 10,00,000.00	Rate to be quoted in Price Bid Document	Rate to be quoted in Price Bid Document
3	Percentage above or below on the items of Annexure - C	Rs 1,06,94,202.92	Rate to be quoted in Price Bid Document	To be quoted in Price Bid Document

Note :-

i) The approximate quantities of principal items of work to be executed and the amount of the schedule rates have been tabulated in Schedule of Quantities enclosed with this tender document.

ii) The Tenderer should quote a flat percentage at per / above / below for the total amount of the above individual schedule (Schedule wise i.e. Schedule A, Schedule B and Schedule C) separately. **Tenders where more than one flat percentage is quoted against any individual Schedule (i.e. Schedule A, Schedule B and Schedule C) will be summarily rejected.**

iii) The Tenderer should quote the percentage both in figures and words. Where there is a difference between percentages, percentage quoted in words will be taken as correct.

iv) This work is to be executed by Cut and Cover Method with Precast Segmental Box.

SCHEDULE OF QUANTITIES

SCHEDULE OF QUANTITIES

NAME OF WORK - CONSTRUCTION OF 07 NOS. RUB/LHS IN LIUE OF LC NO. 44, 48, 51, 52, 54, 57 AND 58 IN BETWEEN DURGAWATI - KARWANDIYA STATION OF SONNAGAR - MUGHALSARAI SECTION WITH PRECAST RCC BOX SEGMENTS BELOW DFC TRACK

Item No.	SOR Item No	Description of Item	Quantity	Unit	Rate (Rs.)	Amount (Rs)
		SCHEDULE -A				
1	012050	Supplying and filling sand in plinth and under floors including watering, ramming, consolidating and dressing complete	1425	cum	602.73	858890.25
2	013110	Earthwork in cutting (classified) in formation, trolley refuges, side drains, level crossing approaches, platforms, catch water drains, diversion of nallah & finishing to required dimension and slopes to obtain a neat appearance to standard profile inclusive of all labour, machine & materials and removing & leading all cut spoils either to make spoil dumps beyond 10m from cutting edge or for filling in embankment with all leads within the section limit, lifts, ascent, descent, loading, unloading, all taxes/royalty, clearance of site and all incidental charges, bailing & pumping out water, if required, etc. complete as per directions of the Engineer-in-Charge. The work is to be executed as per latest / updated edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow. Cut trees shall be property of Railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract				
2(a)	013111	In all conditions and classifications of soil except rock	8700	cum	163.81	1425147

3	013120	Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, rain bunds, if provided, platforms etc. with earth excavated from outside railway boundary entirely arranged by the contractor at his own cost as per RDSO's latest guidelines and specifications and special condition of contract including all leads, royalty, lifts, ascents, descents, crossing of nallahs or any other obstructions. The rates shall include all dressing of bank to final profile, demarcation and setting out of profile, site clearance, removing of shrubs, roots of vegetations growth, heavy grass, benching of existing slope of old bank, all handling/re-handling, taxes, octroi and royalty etc. as a complete job. Cut trees shall be property of railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract.(Corrigendum-1) dated 19.12.12(Note - CBR Value >5)	4500	cum	139.23	626535
4		Extra for mechanical compaction of earth/blanketing material filled in embankment with contractor’s rollers of suitable capacity, type and size to achieve specified density as per specification, testing as per IS codes including cost of water, T&P, consumable material and all labour as a complete job. The work is to be executed as per Latest edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow.	4500	cum	14.8	66600
4	021510	Hiring of JCB Machine (in good working condition) for leveling and dressing ground / dismantling structures including disposal of debris through dumpers etc. with contractor’s labour, JCB machine, machine operator, fuel etc. The contractor shall arrange road permit for vehicle for all the States of operation, as per instructions of engineer in-charge and vehicle shall not be more than three years old. Payment shall be made for actual working hours at site.	175	Hour	640.97	112169.75
5	021550	Hiring of Road crane of 25MT capacity including necessary fuel, oil and operator etc. complete as directed by Engineer-in-charge, the contractor shall be responsible for arranging all types of permits required for the movement of the crane. Payment shall be made for actual working hours at site.	175	hrs	1573.64	275387
6	45010	Supplying reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete -				
6(a)	45016	Thermo-Mechanically Treated bars	47500	Kg	64.46	30618500

			0			
7	191050	Conducting in-situ full size Plate Load Test (PLT) atselected location as per IS:1888 including makingloading arrangements & casting of RCC/cast in-situconcrete footing as per codal provisions includingexcavation and refilling of trial pit				
7(a)	191053	c. Plate size 60cm x 60cm	7	Nos	34043.57	238304.99
8	192010	Earthwork in excavation for foundations and floors of the bridges, retaining walls etc. including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil upto a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge				
8(a)	192011	All kind of soil	11000	cum	292.93	3222230
9	192020	Extra for the quantity of works, executed in or underwater and/or liquid mud including pumping out water as required. (Rate 20% of basic items)	1000	cum	58.58	58580
10	192030	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, .. contd. -	213	cum	2234.33	475912.29
11	192050	Providing and laying in position machine mixed machine vibrated Design Mixed cement concrete M20 Grade etc.	356	cum	2745.77	977494.12
12	194010	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ) in bottom/top slab, side walls, toe wall and sumps haunch filling head walls or any other component using 20mm graded crushed stone aggregate and coarse sand of approved quality of cast in-situ RCC box of size upto 5m (bigger inside dimension) including finishing, Admixtures in recommended proportions (as per IS:9103), if approved in Mix design, to accelerate, retard setting of concrete, improve workability without impairing strength and durability, complete as per drawings and technical specifications as directed by Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra.	2850	cum	2745.77	7825444.5
13	195030	Centring and shuttering including strutting, propping etc. and removal of form for :				

13(a)	195038	In Bottom/top slab, side walls, toe wall and sumps haunch filling head walls or any other component	9657	sqm	227.4	2196001.8
14	222240	Providing cast in situ bridge number plaques as per Railway drawing in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm notch in Bridge parapet coping duly engraving the letter and figures and an arrow indicating the direction of flow and finishing the top exposed surface with cement mortar 1:3, painting letters and figures with two coats of black enamel paint on two coats of white background with alllabour, tools, cement, paint etc. with all leads and lifts	14	each	483.78	6772.92
15	222290	Providing Boulder Backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra.	800	cum	168.19	134552
16	222300	Dewatering of natural or accumulated water from any location. Payment to be done for Horse power of pump multiplied by pumping hours.	185.5	HP Hour		
17	252040	Ordinary Portland Cement Grade-43	1100	mt	6631.36	7294496
			SubTotal (Schedule A)			56413017.62
SCHEDULE-B						
1	**-**	All Items of ECR USSOR as per requirement except item covered in Schedule A above.	As per requirement		As per ECR USSOR	1000000
SCHEDULE-C						
1	NS-1	Design Item- Preparation and submission of structural design and drawing of foundation (including sand/GSB filling for ground improvement and RCC base raft), precast RCC Box Segments, Cast-in-situ/RCC approach RCC trough with RCC roof etc. complete for seven nos RUBs in liue of LCs. The scope of this item includes proof checking from IIT - BHU / Kanpur / Roorkee / Delhi / Kharagpur or MNIT / Allahabad or NIT / Patna and getting approval from DFCCIL.	Per Job	LS	1200000	1200000
1	NS-2	PCC M-30 for wearing coat up for road surface inside of RCC Box.	92	cum	2745.77	252610.84
2	NS-3	Grouting the gap inbetween RCC Box segmant with non shrink cement grout . The cost inclusive of grout, admixure, cement, and all labour, material and equipment . Payment shall be made per kg of grouting material used.	6615	Kg	43.8	289737
3	NS-4	Supply and filling GSB material in foundation wherever required including watering and consolidation.	1296	cum	732	948672

4	NS-5	Providing and fixing of Woven Geotextile made from polypropylene multifilament yarn, having minimum mass of 220 GSM & ultimate tensile strength of 40 KN/m with puncture resistance of 600N and apparent opening size of 150 microns on joints in between RCC Box segments with fixer/adhisive.	546	Sqm	250	136500
5	NS-6	Earthwork in filling in in Subgrade of formation as per RDSO Specification GE-14 with CBR>8, below Blanketting, including dumping, spreading, levelling and compacting in layers as per specification complete.	2500	cum	620	1550000
6	NS-7	Supply, laying,spreading, compacting and finishing of Blanketting material (Natural ot mechanically prepared as per GE-14 for formation of higher axle loading in layer to the specified profile.	1760	cum	969	1705440
7	NS-8	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M25 grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in RCC raft foundation & Pile cap including finishing, using Admixtures in recommended proportions (as per IS:9103), if approved in Mix design to accelerate or retard setting of concrete and/or improve workability without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra.	356	cum	2745.77	977494.12
8	NS-9	Loading, transportation, unloading and placing of RCC Box Segments of Internal size 4.0m x 3.60m and length 1.80m to 2.20m including Loading from Casting Yard,Transportation to bridge site and unloading at Bridge site, Placing to correct profile, line and level on bridge base with all arrangement of hiring of trailor / Crane etc.	69	Nos	42750	2949750
9	NS-10	Exploratory drilling of 150mm diameter boreholes down to maximum 12 m depth in all type of soil including conducting standard penetration tests at specified depth, collection of disturbed, undisturbed samples from boreholes at bridge locations along the proposed alignment. The depth of boring mentioned in the item is only indicative and may vary during execution as per site conditions. Test under this item will be conducted as per special conditions of contract and specifications.	84	metre	870.5	73122

10	NS-11	Conducting laboratory tests on samples as specified in scope of work and submission of report. Test under this item will be conducted as per special conditions of contract and specifications. Chemical analysis tests for sub soil water as stipulated. Item also includes analysis, there complication and submission of report with predictive geotechnical profile of the area and parameter like safe bearing capacity etc. as per special conditions of contract.	84	metre	613.69	51549.96
11	NS-12	Stone Boulder Weighing 15-45 Kg for Stone backing behind RCC Box	800	cum	596.94	477552
12	NS-13	Removing of existing track including removing rails, sleepers and ballast with all contractor's labour, tools, materials, plants machinary, consumables including all lead, lift, ascent, descent, wastage, temporary establishmentetc. Including all incidental worksand other expenditure complete in all respect as directed by DFCCIL. This work is to be carried out during traffic block for each bridge.	210	metre	124	26040
13	NS-14	Laying of track on newly laid box including filling of ballast. Laying rails on PSC sleepers and lifting and packing of track to meet out longitudinal alignment, gauge and level of approaches to make track fit for 20 kmph, all with contractor's labour, material, tool, palnts, machinary, consumables including all lead lift, ascent, descent, wastage, temporary establishment etc.including all incidental works and other expenditure complete in all respects as directed by DFCCIL.	210	metre	129	27090
14	NS-15	Ist and 2nd through packing including giving a general lift as desired to eliminate sags after deep screening, sleeper renewal, etc. so as to make the track fit for 20 kmph.	210	Metre	14.05	2950.5
15	NS-16	Picking up slacks as required and third through packing subsequent to 2nd packing including giving a general lift up to 25mm so as to make the track fit for a speed of 45 kmph after deep screening sleeper renewal etc.	210	Metre	11.7	2457
16	NS-17	Running out of ballast from ballast stack by the side of track in bank and cutting and profiling the ballast as per IRPWM at the indicated locations. The rate includes lead of 15 metre and lift of 2.5 metre.	550	Cum	36.95	20322.5
17	NS-18	Extra for above item of running out of ballast for every 2.5 metre height when the lift exceeds initial 2.5m	550	cum	5.3	2915
			Sub Total (Schedule C)			10694202.92
		Total (Schedule A + Schedule B + Schedule C)				68107220.54

General Conditions of Contract
(GCC)

As per Indian Railways General Conditions of Contract, September-2011 with up to date correction slips / amendments

SPECIAL CONDITION OF CONTRACT

1. DEFINITIONS

Unless excluded by or repugnant to the context:

a) The expression **employer /DFCCIL** as used in the tender papers shall mean the Dedicated Fright corridor Corporation of India Ltd.
b) The expression **Corporation** as used in the tender paper means Dedicated Fright corridor Corporation of India Ltd.
c) The expression **"Department"** as used in the tender papers shall mean Dedicated Fright corridor Corporation of India Ltd.
d) **Drawing** shall be mean the drawings referred to in specifications and any modifications of such drawings approved in writing by engineers and such other drawings as may from time to time be furnished or approved in writing by the Engineer In Charge.
e) **Engineer/ "Engineer-in-charge"** of the work shall mean the 'Representative' appointed by DFCCIL.
f) The **"Site"** shall mean the lands and / or other places on under in or through which the work is to be executed under the contract including any other lands or place used for the purpose of contract.
g) The **"Contract"** shall mean The agreement entered into between the owner and the contractor as recorded in the contract form signed by the parties include all attachment the notice of tender, the sealed quotation and the tender documents including the tender and acceptance thereof together with the documents referred to therein, and the accepted conditions with annexure mentioned therein including any special conditions, specifications, designs, drawings, price schedule / bill of quantities and schedule of rates. All these documents taken together shall be deemed to form one contract and shall be complementary to one another. Contract is deed of contract together with its entire accompaniment and those later incorporated in it by internal consent.
h) The **"Contractor/ consultant"** shall mean the individual or firm or company whether incorporated or not, undertaking the work and shall include legal representative of such an individual or persons comprising such firms or company as the case may be and permitted, assigns of such individual or firm or company.
i) The **"Contract sum" / "Contract price"** shall mean the sum for which the tender is accepted.
j) The **"Contract time"** means period specified in the tender document for entire execution of contracted works from the date of notification of award including monsoon period.
k) A **"Day"** shall mean a day of 24 hours from midnight to midnight irrespective of the number of hours worked in that day.
l) A **"month"** shall mean a calendar month.
m) A **"week"** shall mean seven consecutive days without regard to the number of hours worked in any day in that week.
n) **"Excepted Risks"** are risks due to riots (other wise than among contractor's employees) and civil commotion (in so far as both these are un-insurable) was (whether declared or not), invasion, act of foreign enemies, hostilities, civil war, rebellion, revolution, insurrection, military or usurped power, any acts of God, such as earthquake, lightening and unprecedented floods over which the contractor has no control.
o) **"Temporary works"** shall mean all temporary works of every kind required in or about the execution completion or maintenance of the works.

p) **"Urgent works"** shall mean any measures, which in the opinion of the Engineer, become necessary during the progress of the works to obviate any risk or accident or failure or which become necessary for security of the work or the persons working, thereon.

q) Where the context so requires, word importing the singular number only also include the plural number and vice-versa.

2. GENERAL –

2.1 These special conditions of contract, special specification etc., the schedules of quantities, Indian Railways General Condition of Contract (GCC), Unified Standard Schedule of Rate (USSOR) of ECR and Standard Specification for works and material of ECR and relevant drawings with such amendment which may be published from time to time during the period shall constitute contract documents and the contractors shall satisfy himself in every respects as to the condition and meaning of those contract documents and to the extent and quantity required to be executed as to claim what-so-ever arising through the mis-understanding of the intention of the meaning of any of the terms of expression in these contract documents shall be entertained after the submission of tender.

2.2 The work shall be executed in conformity with the tender documents such as the Indian Railway General condition of contract and standard specifications of East Central Railway with up to date correction slip and their documents as per tender form together with such amendments may be published from time to time and in connection with the special condition and special specification attached.

3.0 SCHEDULE OF CONSTRUCTION

Contractor's structural designs and temporary arrangement drawing etc. should be submitted progressively within 2 months of award of contract. The priority for submission of designs and drawings should be decided in consultation with Engineer-in-charge, and in accordance with program of commencement of various works planned by contractor. DFCCIL will take approximately 15 days time for scrutiny of design and discussions with contractor's consultants. Remedial action on DFCCIL observations will be taken by the contractor within 2 weeks of communication. After final submission of designs and drawings complying with DFCCIL observation, final approval shall be given in approximately 2 week's time.

NOTES :-

Immediately on award of the work the contractor shall contact DFCCIL and obtain copies of profile sketch of RUB's He shall, within 15 days of the award of the contract, submit the completion schedule for the work in the form of bar-charts indicating broad planning of commencement and completion of various components of the work, such as casting of Precast RCC Box segments etc., Preparation of bed including basr raft at bridge site, Transportation and placing of RCC Box at bridge base, Grouting, Construction of RCC Trough on approach and completion of formation work complete. Progressive commencement of the work should be clearly brought out in the broad planning.

(D) is the date of award of contract)

D+2 months	Completion of Geo Tech Investigation & Submission of report, and Submission of design / drawings of all RUB's.
D+18 months	Completion of work

4.0 ITEMS COVERED BY USSOR OF ECR

4.1 The tenderer should indicate percentage above or below against Schedule A & B of the schedule of quantities, the total value of which has been indicated in Schedule A & B.

4.2 For all such works executed and paid based on USSOR of ECR as given in Schedule A & B, the rates quoted by the tenderers shall be inclusive of all cost of the materials and labour unless otherwise specified.

5.0 ITEM NOT COVERED BY USSOR of ECR (Schedule C).

The rate quoted by the tenderer shall be inclusive of all cost of materials and labor unless otherwise specified.

6.0 If there is any delay on the part of the DFCCIL in supplying those materials which the DFCCIL has undertaken to supply the above and if as a result there of the completion of the work is delayed, the DFCCIL will consider granting of suitable extension for such loss of time. The DFCCIL, however not entertain any claim from the contractor in regards to any loss suffered by him on account of his labour etc. sitting idle or any other account as a result of delay in supplying materials.

7.0 The contractor shall at his own cost build suitable damp proof godowns for stacking cement at the site of work.

8.0 It should also be ensured that only approved material shall be used in the work. Rejected material should be removed from the site at the earliest so as to avoid any confusion. Final measurement of all buried works should be recorded before they are covered.

9.0 Successful tenderers will be allowed to use local available size of bricks, but the quality of bricks should be approved by Engineer or his representative and shall be as per GCC and standard specification but, payment will be made as per dimensions in approved plan or otherwise, approved by competent authority. Consumption of cement will be calculated as per actual measurement.

10.0 VITIATION OF CONTRACT

The Contract shall not be vitiated by any inadvertent error of any kind in the surveys, information, specification, drawing or schedule of quantities. However, during execution of work if variation of quantities against item of work become inevitable and such variation causes vitiation of the contract, the amount of vitiation will be deducted from the contractor's bill without any reference.

11.0 Measurement and Payment.

11.1 Payment will be made for entire work executed strictly as per drawing and as finally measured.

11.2 Payment of Earthwork will be made on the basis of final cross section only and no extra allowance should be granted for any settlement of the earthwork into the natural ground. No deductions on account of shrinkage will be made from the quantity worked out based on the cross section.

12.0 Contractor's liability during maintenance period. On the completion of the work to the satisfaction of the DFCCIL it will be taken over. **From the date of taking over, the contractor shall be responsible for the maintenance of the work for further period of six months**. During the **maintenance period of Six months** contractor shall take immediate action to remedy and rectify the hidden defects, workmanship which may become apparent and which may be called for, to rectify by DFCCIL's notice, in written, should be rectify by the contractor. If contractor fails to make adequate arrangement to rectify the defects within seven days from the receipt of such notice, the DFCCIL may, without further notice, make his own arrangement for rectification of such defects and the cost of such rectification shall be recovered from the security deposit of the contractor retained by the DFCCIL and from any other money dues to the contractor' under this or any other contract.

13.0 **Price escalation. :-**

(A) General

(I) The rates quoted by the tenderer and accepted by Railway Administration shall hold good till the completion of the work and no additional individual claim will be admissible on account of fluctuation in market rates, increase in taxes/any other levies/- tolls etc. except that payment/recovery for overall market situation shall be made as per price variation clause given in Para below.

(II) No cognizance will be given for any sort of fluctuations in taxes and other market conditions etc. for any individual item for the purpose of making adjustment in payments The contract shall, however, be governed by the general price valuation clause.

(III) The price variation should be based on the average price index of the 3 months of the quarter instead of the price index of the first month of the quarter under consideration.

(B) Applicability of Price Variation Clause

(I) The applicability of this Clause to this tender is subject to the relevant provision of this document and fulfilling following conditions.

(II) This Price Variation Clause shall be applicable only to contracts more than Rs. 0.5 Crore in value, the value being the value of actual work to be executed by the contractor, i.e. excluding the cost of materials supplied free of cost by the Railway, on the basis of tendered quantities. If this value is less than Rs. 0.5 Crore the Price Variation Clause shall not be applicable, even though this clause may be printed in the tender documents and where the value of work executed by contractor becomes more than 0.5 Crore (as a result of subsequent variation, (NS Item etc), the original value having been less than Rs.

0.5 Crore, this clause will not be applicable.

(III) The Price Variation clause will be applicable to all extensions of time granted to the date of completion except extension granted under clause 17-B (Extension of time for delay due to contractor) of Indian Railway General Condition of Contract. Price variation is not applicable for any new NS item that may be included subsequent to finalization of contract.

(IV) If in any case, the accepted offer includes some specific payment to be made to consultants or some materials supplied by

Railway at fixed rate, such payments should be excluded from the gross value of the work for purpose of payment/recovery of variation.

(C) Method of calculation of adjustment

The amount of adjustment i.e. total decrease / increase in total payable amount shall be calculated by the following formula for each component of input i.e. Labour, Material, Fuel, Explosive, detonator. There shall be a fixed component also on which no adjustment shall be made.

(I) METHOD OF CALCULATION:

For Items Other than Supply of Steel & Cement

(a) $$L = \frac{R \times (l - l_0)}{l_0} \times \frac{P}{100}$$

(b) $$M = \frac{R \times (W - W_0)}{W_0} \times \frac{Q}{100}$$

(c) $$U = \frac{R \times (F - F_0)}{F_0} \times \frac{Z}{100}$$

(d) $$X = \frac{R \times (E - E_0)}{E_0} \times \frac{S}{100}$$

(e) $$N = \frac{R \times (D - D_0)}{D_0} \times \frac{T}{100}$$

M = Amount of price variation in materials.

U = Amount of price variation in fuel.

X = Amount of price variation in explosives.

N = Amount of price variation in detonators.

R = Gross value of the work done by the contractor as per on- account Bills excluding costs of materials supplied by Railways free or at a fixed price or supply of steel and cement by contractor, which is paid under Schedule 'C'. This will also exclude specific, payment, if any, to be made to the consultants engaged by the contractors (Such payment will be indicated in the contractor's offer).

I 0 = Consumer Price Index Number for Industrial Workers All India – published in RBI Bulletin for the base period.

I = Average Consumer Price Index number for industrial workers All India- Published in RBI Bulletin for the 3 months of the quarter under consideration.

Wo = Index Number of Wholesale Prices – By groups and subgroups- All commodities as published in the R.B.I. Bulletin for the base period. W = Average Index Number of Wholesale Prices - By groups and
Subgroups - All commodities as published in the R.B.I. Bulletin for the 3 months of the quarter under consideration.

Fo = Index Number of Wholesale Prices – By groups and sub-groups for Fuel, Power, light and lubricants as published in the R.B.I. bulletin for the base period.

F = Average Index Number of Wholesale Prices - By groups and subgroups for fuel, power, light, and lubricants as published in the

R.B.I. Bulletin for the 3 months of the quarter under consideration.

E o = Cost of Explosives as fixed by DGS&D in the relevant rate contract of the firm from whom purchase of explosives are made by the contractor for the base period.

E = Average cost of Explosive as fixed by DGS&D in the relevant rate contract of the firm from whom purchase of explosives are made by the contractor for the 3 months of the quarter under consideration.

Do = Cost of detonators as fixed by DGS&D in the relevant rate contract of the firm from whom purchase of detonators are made by the contractor for the base period.

D = Average cost of detonators as fixed by DGS&D in the relevant rate contract of the farm from whom purchase of detonators are made by the contractor for the 3 (three)months of the quarter under consideration.

P = % of Labour component.

Q = % of Material component.

Z = % of Fuel component.

S = % of Explosive component.

T = % of Detonators component.

(II) Method of Calculation For Supply of Cement

This special PV clause will be applicable only for supply of Cement:-

Price of Cement is to be linked with the Wholesale Price Index of the respective sub group as per RBI Index Numbers. Henceforth, the formula for calculating the amount of variation on account of variation in prices of Cement would be as indicated below:-

(a) Mc =R1 x (Wc-Wco)/ Wco

Mc = Amount of price variation in material (Cement).

R1 = Value of Cement supplied by Contractor under Schedule 'C' as per on account bill in quarter under consideration.

Wco = Index No. of Wholesale Price of subgroup (of Cement) as published in RBI Bulletin for the base period.

Wc = Index No. of Wholesale Price of subgroup (of Cement) as published in RBI Bulletin for the 1 st
month of the quarter under consideration.

(III) INDEX NUMBER :

The index number of the base month shall be that published by R.B.I. for the month of opening of the tender and the quarters will commences from the month following the month of opening of the tender. However, in case the tender is finalized after the negotiation, base month for the price variation clause is the month in which negotiations are held. Quarterly periods shall also be counted commencing from the month following the month in which the last negotiation was held leading to the award of contract.

(IV) The percentages P, Q, Z, S, T of various components i.e. labour, materials etc for different type of work shall be as follows: -

(a) Earth work Items

Labour components 50%

Fuel components 20%
Other material components 15%
Fixed components 15%

(b) Ballast and Quarry products Items

Labour components 55%
Fuel components 15%
Other material components 15%
Fixed components 15%

(C) Tunneling Items

Labour components 45%
Fuel components 15%
Explosive component 15%
Detonator component 5
Other material components 5%
Fixed components 15%

(D) Other works Items

Labour components (P) 30%
Material components(Q) 25%
Fuel components (Z) 15%
Fixed components 30%

(V) The amount on which the adjustment is to be calculated, shall be the amount payable to the contractor for the item or items of various types of works given in the reference quarter, Refer (E) below for procedure of calculation of adjustment.

(VI) The calculations for adjustments in the amount payable to the contractor shall be made on the value of the work done in each quarter by the contractor. Quarterly periods shall be counted commencing from the month following the month in which tender have been opened. However, in case the tender is finalized after the negotiation, quarterly periods shall be counted commencing from the month following the month in which the last negotiation was held leading to the award of contract, Refer (E) below also. The calculations for adjustments should be based on the average price Index of the three months of the quarter.

(VIII) The demand for escalation of the cost may be allowed on the basis of provisional indices made available by the Reserve Bank of India. Any adjustment need to be done based on the finally published indices shall be made as and when they become available.

(IX) Supply of steel

Ms= Q (Bs-Bso) where

Ms= Amount of price variation in steel payable/recoverable

Q = Weight of steel in tones supplied by the contractor as per the on account bill for the month under consideration

Bs = SAIL's (Steel Authority of India Limited) ex-works price plus Excise Duty thereof (in rupees per ton) for the relevant category of steel supplied by the contractor as prevailing on the first day of the month in which the steel was purchased by the contractor (or) as prevailing on the first day of the month in which steel was brought to the site by the contractor whichever is lower.

Bso =SAIL's ex-works price plus Excise Duty thereof (in rupees per ton) for the relevant category of steel supplied by the contractor as prevailing on the first day of the month in which the tender was opened.

Note:-

(i) Relevant categories of steel for the purpose of operating the above price variation formula based on SAIL's ex-works price plus Excise Duty thereof are as under:-

SL No	Category of steel supplied in the railway work	Category of steel produced by SAIL whose ex-works price plus Excise Duty thereof would be adopted to determine price variation.
1	Reinforcement bars and other rounds.	TMT 8 mm IS 1786 Fe 415
2	All types and sizes of angles.	Angle 65 x 65 x 6 mm IS 2062 E250A SK
3	All types and sizes of plates.	PM Plates above 10-20 mm IS 2062 E250A SK
4	All types and sizes of channels and joists.	Channels 200 x 75 mm IS 2062 E250A SK
5	Any other section of steel not covered in the above categories and excluding HTS.	Average of price for the 3 categories covered under Sl. no. 1, 2, 3 above.

(ii) The prevailing ex-works price of steel per ton as on 1 st of every month for the above categories of steel as advised by SAIL to Railway Board.

(E) MAKING ADJUSTMENTS FOR PRICE VARIATION

(i) The adjustment for variation in prices i.e. extra payment in case of increase and recovery in case of decrease, as required, shall be made once in every quarter in the on accounts payments. If more than one on account payment is made to the contractor in a quarter, the adjustment, if required, shall be made as and when they become available.

(ii) It shall be contractor's responsibility to submit the value of various price Indices for appropriate points of time along with proof / authenticity thereof, to enable the Railway to calculate the price variations.

(F) METHOD OF OPERATION OF THIS CLAUSE

i. Since the adjustment of payments are based on the amount of work done by contractor in each quarter, measurements of actual work done must be taken and recorded in the measurements books and signed by the contractor at the end of each quarter, if not frequently.

ii. Since the various Indices are published by RBI / Ministry of Labour a few months later than the months to which they pertain, the normal on account bills based on quarterly measurements will be prepared as per current procedure on the adopted rates without considering the Price Variation clause.

iii. The adjustments in Price variations shall be done subsequently. through separate series of on account bills, called Escalation on account bill no 1,2 etc. the adjustment bills and the normal on account bills will be kept independent of each other for facility of operations.

14.0 Contract Labour (Regulation abolition Act. 1970).:-

The attention of the tenderer/s are drawn to the contract labour (Regulation and abolition) Act., 1970 and labour (Regulation and abolition) Central Rules, 1971 and Clause-55 of the Indian Railway General Condition of the Contract, successful tenderer/s shall comply with the provision of the Act and Rules. DFCCIL being the principal employer under the said act and rules.

15.0 Variation in extant of contract :-

Tenderer shall note that the modifications of the contract envisaged in clauses of the regulation for tender and contracts General conditions of contract with up to date correction slips / amendments and Standard specification of works and material of East Central Railway , is limited to the extent of 25% on increase in quantities depending upon the nature of work occurring during physical execution of the work. The tenderer shall not be entitled to any compensation what-so-ever on account of such variations and payment shall be allowed only in respect of actual quantities executed at the accepted rates specified in the original Contract.

The procedure detailed below shall be adopted for dealing with variations in quantities during execution of works contracts:

I) 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. For this, no finance concurrence would be required.

II) 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 an officer of the rank not less than GGM/GM/CPM :

(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 circumustances 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 agreement value should not be permitted and, if found necessary, should be only through fresh tenders or by negotiating with existing contractor, with prior finance concurrance and approval of Group General Manager / General Manager / Chief Project Manager.

(III) In cases where decrease is involved during execution of contract:

(a) The contract signing authority (not less than GGM/GM/CPM) can decrease the items upto 50 % of individual item without finance concurrence.
(b) For decrease beyond 50% for individual items with approval contract signing authority (not less than GGM/GM/CPM) of 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.

(IV) 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.

16.0 (A) The tenderer shall be required to deposit **Bid Security** of Rs 13,62,200/- in the form of FDR / Demand Draft.

(B) Unless otherwise specified in the special conditions , if any, the **security deposit** /rate of recovery /mode of recovery shall be as under :

(i) The Security deposit shall be 5% of the contract value.

(ii) The rate of recovery shall be @10% of the bill amount till the full security deposit is recovered.

(iii) Security deposits will be recovered from the running bills of the contract and no other mode of collecting SD such as SD in the form of instruments like BG, FD etc. shall be accepted towards Security Deposit.

(C) Performance Guarantee (P.G) :- The procedure for **Performance Guarantee** is outlined below :-

(i) The successful Contractor shall have to submit a **Performance Guarantee (PG)** in form of FDR / Bank Guarantee amounting to 5% of the contract value within 30 (thirty) days from the date of issue of Letter of Acceptance (LOA). Extension of time for submission of PG beyond 30 (Thirty) days and upto 60 (sixty) 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 15% per annum shall be charged for the delay beyond 30 (Thirty) days i.e. from 31st day after the date of issue of LOA. In case the contractor fails to submit the requisite PG even after 60 days from the date of issue of LOA, the contract shall be terminated duly forfeiting Bid Security Deposited and other dues, if any payable against that contract. The failed contractor shall be debarred from participating in re-tender for that work. The performance guarantee shall be submitted in the format provided in Annexure-III.

(ii) The Performance Guarantee shall be submitted by the successful Contractor 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 completetion 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.

(iii) The value of P.G 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 5% (Five percent) for the excess value over the original contract value shall be deposited by the contractor.

(iv) The Performance Guarantee (PG) shall be released after physical completion of the work based on the 'Completion Certificate' issued by the competent authority stating that the contractor has completed the work in all respects satisfactorily. The Security Deposit shall, however, be released only after expiry of the **maintenance period of Six Month** from the date of taking over of the work and after passing the final bill based on " No Claim Certificate' from the contractor.

(v) Whenever the contract is rescinded, the Security Deposit shall be forfeited and the Performance Guarantee shall be encashed. The balance work shall be got done independently without rist and 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.

(vi) The DFCCIL shall not make a claim under the Performance Guarantee except for amounts to which the President of India is entitled under the contract (not withstanding and/or without prejudice to any other provision in the Contract Agreement) in the event of :

(a) 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.

(b) Failure by the contractor to pay President of India 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.

(c) The Contract being determined or rescinded under provision of the GCC, the Performance Guarantee shall be forfeited in full and shall be absolutely at the disposal of the President of India.

17.0 Date of completion of the work.

Works are required to be completed within a period of **18 (Eighteen) months** from the date of issue of letter of acceptance of the tender.

18.0 Witness of measurement and signing of bills :-

The final measurement of works will be recorded within 21 (Twenty one) days from the date of completion and the contractor should also be available during the period for signing the bills.

19.0 **Maintenance Period of the work. (Defect Liability period)**

The Maintenance period shall be **Six Month from** the date of taking over of the work from the contractor.

20.0 Code / Standards/ Manual for the work

(I) Introduction

The Materials and workmanship specification as follows has been based on Indian Standards and International Standards as scheduled below. Apart from the basic data, specifications etc. all items of works shall be governed by the Codes & Specifications as detailed hereunder and as revised / corrected / amended up to 28 days before the due date of submission of the Bid Proposal.

The Contractor shall also be responsible for getting the approval from dfccil for the International Standards which are not specifically included herein below and the Contractor intends to apply the same for the detailing of his design, additionally.

(II) Relevant Standards

All items of works shall be governed by the latest versions of the following Codes, Specifications as revised/corrected/amended (with latest correction slip) up to the time as specified above. In case of any contradiction in various codal provisions, the order of precedence shall be as follows:

a) Specific provisions in the Special Condition of Contract
b) IRS Codal provisions
c) IRC Codal Provisions
d) IS Codal Provisions
e) Provisions in other International Codes

(III) Indicative List of Code / Standards / Manual are scheduled as below:

(A) Indian Railway Standard Codes and Specifications (IRS)

(1) Indian Railway Brides Rules, specifying the loads for Design of Superstructure and Substructure of Bridges (with up to date correction slip) and Chapter – VII for the rule for the opening of Railway adopted in 1941 – Revised – August 1982

(2) Loading Standards as given in Design Criteria (in the Employer's Requirements – Design of the Bid Documents)

(3) Indian Railway Schedule of Dimensions for Broad Gauge

(4) Standard Schedule of Dimensions for Eastern Dedicated Freight Corridor for Indian Railways.

(5) Indian Railway Code for Practice of Plain/Reinforced and Pre-stressed concrete for general/bridge construction (Concrete Bridge Code- 1997) with correction slips up-to-date

(6) Indian Railway – Engineering Code

(7) RDSO' No. RDSO/CBS/Bearing dated 22-06-2011 – Guidelines for design of Spherical and Cylindrical bearings

(8) Indian Railway Bridge Manual 1998 with correction slip up-to-date

(9) Indian Railways Permanent Way Manual

(10) Indian Railways Works Manual

(11) IRS Standard Code of Practice for design of Sub-structure & Foundation

(12) IRS: Manual on the design and construction of well and pile foundation

(13) Guidelines for Earthwork in Railway Projects: Guideline No. GE: G-1, July, 2003.

(14) Guidelines on Erosion Control and drainage of Railway Formation - Guideline No. GE: G-4

(15) Report No. RDSO/2007/GE: 0011: Guidelines for blanket layer provision on track formation with emphasis on heavy axle load train operation

(16) RDSO Specification No. GE: IRS-2 (Final): Specification for mechanically produced blanketing material for railway formation including guidelines for laying

(17) Guidelines and Specifications for Design of Formation for Heavy Axle Load – Report No. RDSO / 2007 / GE : 14

(18) Report No. GE: R-50: Transitional System on approaches of bridges issued by RDSO.
(19) IIT/Kanpur- RDSO guidelines on Seismis Design of Railway Bridges.
(20) East Central Railway Standard Specification for works and material.

(B) Indian Road Congress (IRC) Codes and Specifications

(1) IRC: 6 Standard Specifications and Codes of Practice for Road Bridges – Section – II – Loads and Stresses – Seismic provisions of this standard are to be adopted for the bridge design

(2) IRC: 83 (Part – III) - Standard Specifications and Codes of Practice for Road Bridges – Section – IX – Bearings Part –III, Pot, POT cum PTFE Pin and Metallic Guide Bearings

(3) IRC-87: Design and erection of false work for road bridges

(4) Specifications for Road and Bridge Works issued by Ministry of Road Transport & Highways. (MORTH)

(5) SP 6, 7, 16, 21, 22, 23, 24, 34, 36, 52, 60, 70.

(C) Indian Standard Specifications
(1) IS: 875 (all 5 parts) – Design loads (other than earthquakes) for buildings and structures.
(2) IS: 456 Plain and reinforced concrete
(3) IS: 269 Indian Standard Specifications for Ordinary & Low Heat Portland Cement

(4) IS: 8112 43 Grade OPC

(5) IS: 383 Coarse and fine aggregate from natural sources for concrete
(6) IS: 2386 (all 8 parts) – Tests for aggregates for concrete
(7) IS: 3025 (all 49 parts) – Methods of sampling and test for water and waste water

(8) IS: 3085 Method of test for permeability of cement mortar and concrete

(9) IS: 1199 Indian Standard Specifications for Method of Sampling and analysIS: of concrete

(10) IS: 7320 Concrete slump test apparatus
(11) IS: 5515 Compaction factor apparatus
(12) IS: 1791 Batch type concrete mixers
(13) IS: 4634 Methods of testing performance of batch type concrete mixers

(14) IS: 2722 Indian Standard Specifications for Portable Swing Weight batches for concrete (Single and Double Bucket type)

(15) IS: 6925 Methods of test for determination of water soluble chlorides in concrete admixtures

(16) IS: 9103 Admixtures for concrete

(17) IS: 516 Method of test for strength of concrete
(18) IS: 4031 (all 15 parts) – Physical tests for hydraulic cement

(19) IS: 5513 Vicat apparatus

(20) IS: 10080 Vibration machine for casting standard cement mortar cubes

(21) IS: 10262 Concrete mix design

(22) IS: 4926 Indian Standard Specifications for Ready Mixed Concrete

(23) IS: 1892 Subsurface investigations
(24) IS: 2720 (all 41 parts) – method of tests for soil

(25) IS: 2132 Thin walled tube sampling of soils

(26) IS: 2131 Standard penetration test for soils

(27) IS: 1893-2002 Criteria for Earthquake Resistance Design of Structures
(28) IS: 4326 Earthquake Resistance Design and Construction of Buliding – Code of Practice
(29) IS: 13920 Ductile detailing of reinforced concrete structures subjected to seismic forces
(30) IS: : 875 (Part 3) – 1987 – Code of Practice for Design Loads (Other than Earthquakes) for Buildings and Structures – Wind Loads (Second Revision)

(31) IS: 1786-1985-High Strength Deformed Steel Bars & Wires for Concrete Reinforcement (Third Revision)
(32) IS: 432 (Part-I & Part-I) – 1982 – Mild Steel, Medium Tensile Steel Bars and Hard Drawn

(33) IS: 280 Mild steel wire for general purposes

(34) IS: 2502 Code of practice for bending and fixing of Bars for concrete reinforcement

(35) IS: 1343 Prestressed concrete

(36) IS: 14268 Prestressing Strands

(37) IS: 4082 Recommendations of stacking and storage of construction materials at site

(38) IS: 800 General construction in steel

(39) IS: 2062 (2006) -- Hot Rolled Low Medium and High Tensile Structural Steel
(40) IS: 1261 – 1959 – Seam Welding in Mild Steel (Reaffirmed 1998)
(41) IS: 1367 – Technical Supply conditions for Threaded steel fasteners

(42) IS: 816 Metal arc welding for general construction in mild steel

(43) IS: 8629 (Parts I to III) – 1977 – Protection of Iron and Steel Structures from Atmospheric Corrosion (Reaffirmed 2002)
(44) IS: 3757 – 1985 – High Strength Bolts
(45) IS: 6623 – 1985 - High Strength Nuts.
(46) IS: 6911 – Stainless Steel
(47) IS: 1363 (all 3 parts) – Hexagon head bolts, screws and nuts of product grade C
(48) IS: 6639 Hexagonal bolts for steel structures.
(49) IS: 102 Ready mixed paints, brushing, red lead, non-settling priming

(50) IS: 123 Ready mixed paints, brushing, finishing, semi-gloss, for general purposes to Indian Colours etc.

(51) IS: 104 Ready mixed paint, brushing, zinc chrome, priming
(52) IS: 2074 Ready mixed paint, air drying, red oxide-zinc chrome
(53) IS: 34 White lead for paints
(54) IS: 2339 Aluminum paints for general purposes, in dual container

(55) IS: 2751 Code of Practice for Welding of Mild Steel Bars used for reinforced concrete construction
(56) IS: 3400 (all 22 parts) – Methods of tests for vulcanized rubbers

(57) SP 70: 2001 Handbook on construction safety practices.
(58) IS: 3764 Safety code for excavation work

(59) IS: 4081 Safety code for blasting and related drilling operations

(60) IS: 7293 Safety code for working with construction machinery

(61) IS: 7205-1974-Safety Code for erection of Structural Steel Work (Fifth Reprint July, (2001)
(62) SP 22 (S&T): 1992 Explanatory Hand Book on codes for Earth Quake Engineering
(63) IS: 3696:1987 (Part – I & Part-II)) Safety code for scaffolds and Ladders
(64) IS: 3016:1965 Code of practice for Fire precaution in welding and cutting operations
(65) IS: 14881:2001Method for Blast Vibration Monitoring – Guidelines
(66) IS: 1852 Rolling and cutting tolerances for hot rolled steel products
(67) IS: 817 Training and testing of metal arc welders
(68) IS: 1270 Metric steel tape measure

(69) IS: 1200 (all relevant parts) – Method of measurement of building and civil Engineering works
(70) IS: 786 Conversion factors and conversion tables
(71) IS: 8500-1991 Structural steel – Micro alloyed (Medium and high strength qualities – specification (first Revision)
(72) IS: 9595-1996 Metal Arc welding of Carbon and Carbon Manganese Steels – Recommendations (First Revision)
(73) IS: 1148-1982 Specification for hot rolled rivet bars (upto 40mm dia) for structural purposes (third revisions)
(74) IS: 1149-1982 High tensile steel rivet bars for structural purposes (third revision)
(75) IS: 1030 Grade 280-520W - Cast Steel
(76) IS: 75 Linseed oil, raw and refined
(77) IS: 77 Linseed oil, boiled for paints
(78) IS: 487 Brush, paint and varnish (92) IS: 1915 Steel bridge code
(79) IS: 6586 Metal spraying for protection of iron steel
(80) IS: 5666 Etch primer
(81) IS: 887 Animal tallow
(82) IS: 816 Metal arc welding for general construction in mild steel
(83) IS: 1785 Part 1 High Tensile Steel Wire
(84) IS: 1498-1970 Classification and identification of soils for general engineering purposes
(85) IS: 1725-1982 Specification for soil based blocks used in general building construction
(86) IS: 1888-1982 Method of Load Test on Soils
(87) IS: 1904-1986 Code of practice for design and construction of foundations in soils: General Requirements
(88) IS: 2809-1972 Glossary of Terms and Symbols Relating to Soil Engineering
(89) IS: 2810-1979 Glossary of terms relating to soil dynamics

(D) Other International Codes

(1) EN 1992 – 1:2004 (Eurocode 2 – Design of Concrete Structures, Part – 1 – General Rules and Rules for Buildings)
(2) EN 1337-7 (March 2004) – Structural bearings – Part 7 : Spherical and Cylindrical PTFE bearings

(E) UIC Codes

(1) UIC 774 – 3R –Track Bridge interaction Recommendation for calculation (for Forces due to LWR)

(2) UIC 772R: Bearings of rail bridges

(3) UIC 774-3R: Track/Bridge interaction

(F) BS Codes

(1) BS-3784: Grade “A” Specifications for Polytetrafluroethylene

(2) BS-5350: Standard Method of test of adhesives, Part C9, Floating roller peel test
(3) BS-5400: Part – 1 General Statement
(4) BS-5400: Part – 2 Specifications for loads

(5) BS-5400: Part 6 Steel, Concrete and Composite Bridges-Specifications for Materials and Workmanship-Steel

(6) BS-5400: Part- 9 Bridge Bearings

The above list is indicative and only for the guidance of the Contractor.

The list given above is by no means exhaustive. All IS, IRC and IRS Codes pertaining to the work shall be applicable.

Copy of the any above standard shall be made available by the contractor to the DFCCIL whenever asked by the DFCCIL.

21.0 Detailed Design and Drawing.

(A) The basis for the design of structure, foundation, sub-structure, superstructure, protection works shall be based on relevant IRS Code.

(B) Design Criteria

The design criteria for the RCC box to be provided for RUBs shall be as under:

(1) Design shall be suitable for DFC Loading (32.5 tonne axle load) with PSC sleepers. Load condition includes the live load, earth pressure and longitudinal forces due to braking and traction considering the wind load etc. as per relevant codes.
(2) Bridges shall be designed as per the Design Criteria specified herein, IRS Bridge Rules and IRS Code of Practice for Plain, Reinforced & Prestressed Concrete for General Bridge Construction (Concrete Bridge Code)', IRS Code of Practice for Design of Sub-structure and Foundations of Bridges, IRS Bridge Manual with latest correction slips and other relevant Codes as applicable.
(3) Footpath/ walkway width shall be provided on one side of Up track and on one side of Down track.Its width shall not be less than 900mm. Footpath may be Cast – in-situ.
(4) Fe 500 grade steel conforming to IS 1786: 1985 shall be used as reinforcement.Use of protective coatings for steel and corresponding increase in lap lengths shall be decided based on site conditions.
(5) Length of laps shall be as per the Specifications and IRS Concrete Bridge Code.
(6) Backfill material shall be as per Clause 7.5 of the IRS Bridge Sub-structure and Foundation Code.
(7) Clear cover to main reinforcement shall be as per the Specifications and IRS Concrete Bridge Code.
(8) Depth and size of foundation, return walls, levels of upstream and downstream shall be decided based on site conditions.
(9) Tolerances shall be followed as specified in the Specifications and as per the IRS Concrete Bridge Code.
(10) Grade of concrete shall be as per the exposure conditions as specified in the Specifications and IRS Concrete Bridge Code.

(11) Grade of concrete for Plain Cement Concrete (PCC)/RCC shall be as specified in the Specifications and IRS Concrete Bridge Code.The Contractor shall provide the earthing bars and earthing lugs as per the design provided by DFCCIL.

(12) Drawings for the Bridge as included in Bid document are indicative.

(13) Adequate arrangement shall be made on the bridges for passage and protection of all the cables including that of Signalling & Telecommunication cables as required.

(C) Loading for Bridges

Various load for Bridges such as Dead Load, Superimposed Load, Live Load, Dynamic Effect etc. shall be considered as per IRS Bridge Rule. Gradient effect should be considered as per IRS Sub structure and foundation code . For Road Loading various provisions as per relevant IRC code should be followed.

(D) Design Calculation and working drawings after proof check from IIT-BHU/Kanpur / Roorkee /Delhi / Kharagpur or MNIT/Allahabad or NIT/Patna should be submitted to DFCCIL for approval.

(E) Observations raised by DFCCIL should be complied and necessary revision should be made in Design / Drawing.

(F) Work should not be carried out until design/ drawing has not been approved by DFCCIL.

22.0 Setting up of laboratory at site

(A) The Contractor Shall Construct Site Laboratory with adequate furnishing and fixtures to do various tests on soil, concrete, reinforcement etc. The site laboratory should have adequate space to accommodate all required equipments for various tests related to the contract for ensuring the required quality and standard.

(B) Standard of Construction – The laboratory shall be constructed to the best Engineering practices and as approved by the DFCCIL.

(C) Laboratory Equipment – Contractor shall provide adequate nos. of laboratory equipments for doing necessary tests on concrete, soil, blanketing material, reinforcement etc. The laboratory equipment shall be provided as per codal provision and as approved by the DFCCIL. Indicative list of laboratory equipment is given below.

(D) Laboratory shall be open for use and inspection by the DFCCIL at any time.

(E) All gauges, machine equipment and other measuring and testing equipment of the laboratory shall be got checked/calibrated regularly as directed by the DFCCIL and necessary certificate furnished to the DFCCIL by the Contractor.

(F) The contractor shall render all reasonable assistance and help in making the checks and tests. All the equipment, machinery etc. shall be kept in good working condition.

(G) The cost of setting up the laboratory, equipping the same, maintaining, conducting all tests on materials and cubes shall be born by the contractor, within his quoted rates for works.

(H) The following is the indicative list of Equipments in the laboratory at site, which are to be provided by the contractor at his cost.

S.No	Particular
1	Oven Electrically operated,thermostatically contralled range up to 300 deg C.
b	Strip heater+Air Circulating fan fitted in above
2	Is 460-sieve sets 450mm internal dia .with lid and pan .sizes 75,63,53,37.5,26.5,20,19,13.2,9.5,6.7&4.75mm
3	I.S 460-Sieve sets 200mm internal dia, with lid and pan sizes of 4.75,2.36,1.18,1.7mm,600,500,425,300,212,150,75 micron
4	C.I wts 1.2,5,10,720kg -1 of each
5	wts 10,20,50,100,200,500g
6	sieve shaker suitable for 200mm,300mm and 450mm dia sieves-Electrically operated with timer switch
8	Beakers 25,50,100,250,500&1000ml (Plastic -jointless)graduted.
9	Dishes 150ml Cap
10	Measuring cylinder 100,250,500,1000ml glass
11	Glass Rod &funnels
12	Glass Thermometer in plastic jacket 110C
13	Hot plate 200mm dia -1500watt improved with thermostat
14	Enamel Trays 600x450x50mm
15	450x300x40mm
16	300x250x40mm
17	Round 250mm
18	Spautla 100mm and 200mm long
19	Standred weights up to 1g
20	Pipettes
21	First aid box
22	Chisel-6"approx(taparia or equivalent)
23	Rammer 2kg with wodeen handle
24	Filter paper packet of 100 sheets 150mm dia
25	As above but 110mm
26	Specific gravity bottle 100 ml with teflon stopper
27	As above but 150ml
28	Density backet 3,15&30liters cap

29	Cylinder 100ml&250ml
30	Cylinder 500ml&1000ml
31	Ambient thermometer
32	Rubber mallet 3"approx
33	Digital thermometer 300x0.1C-battery operated
34	Liquid limit with Casagrande& ASTM grooving tools as per IS:2720
35	Plastic Limit app.(Glass plate 450x450x10mm with brass rod)
36	Moisture Content tins
37	High speed Stirrer -motorised with jar and speed regulator
38	Soil hydrometer with hydrometer jar
39	Sampling pippete with pressure and suction inlets,10ml cap
40	Modified compaction appratus (Heavy) 2250ml Cap mould with collar,base plate and 4.89kg hammer
41	sand pouring app.150mm dia with conical funnel and top and base plate; calibrating container and tray with hole.
42	Speedy moisture meter in carrying case with chemical
43	CBR testing 150 M/C -Electrical cum manual operating,superior quality with minimum vibration,5000 kgs cap with forward/reverse facility
44	CBR plunger with settlement dial gauge holder
45	Surcharge weight 147 mm dia 2.50 kg with central hole.
46	CBR moulds 150mm dia complete wih coller &base plate
47	Perforted plate (Brass)
48	Soaking tank suitable for 9 CBR moulds with stand
49	Proving rings of 1000 kg capacity with certificate from govt.agency
50	Proving rings of 2250 kg capacity with certificate from govt.agency
51	Dial gauges 25 mm travel -0.01mm/division
52	Swell tripod for holding dial gauge
53	Calcium Carbide powder -pkt of 500g approx.
54	Slotted weights 2.5kg
55	Vicat needle apparatus for setting tme with plungers as per I.S 269
56	Cube Moulds-150mm with ISI mark
57	Cube moulds -100mm with ISI mark
58	High frequency mortor cube vibrator
59	Concrete mixer power driven,2cft cap with tilting facility&wheels
60	Vibrating table with variable amplitude size 1mx 1m- moistured
61	Equipment for slump test as per IS:7399
62	0.5 cft.1 cft cylinder for checking bulk density of aggregate
63	Soundness testing apparatus for cement.Consists of water bath &Le-Chatelier moulds with glass plate & lead weight

64	Aggregate Impact Value app. With cups &rod -as per IS:2386(4)
65	Compression testing mechine: 2000 KN Capacity- Electiricallty cum manually operated with 3 gauges 2000nx10KN,1000x5KN and 500x2 KN with our certificate of calibration..
66	Flakiness tese gauge
67	Elongation test gauge
68	Los angles abrasion testing M/C - Electical with counter&tray
69	Standred sand Gr-II -bag of 25 kg
70	Corecutter with dolly rammer.
71	Dessicator 250mm dia -vacuum type
72	Cube moulds 7.06 cm - made of steel
73	Aggregate Crussing value with jug & tampimg rod
74	Single point Liquid Limit app.
75	Stop watch
75	Water testing kit- Digital for PH, TDS, Conductivity,ORP,Temp& Dissolved oxygen - mains cum battary open in Brief case
76	Level 300 mm long approx
77	Pycnometer with brass cone and rubber seal IL cap
78	spacer disk 148mm dia 47.7 mm ht. with handle.
79	unconfined compressio test -Electrical cum manual operation
80	Flow table as per IS 712 -manual, with cone
81	Equipment for determination of Specific Gravity Consisting of density balance (Electronic with battary) with Frame ,density basket
82	Needle vibrator with flexible shaft and 30mm needle
83	Air entrainment meter 5 L cap as per ASTM C 231
84	Chloride Testing Kit- Chemicals only
85	Concrete permeability apparratus -100mm dia. Single cell Model (as per IS:3085) Without air compressor
86	Air compressore for above with auto- cut off for switch
87	Moisture tins
88	Toyo Platform scale cap -100kg acc-10g
89	Toyo Platform scale cap -30kg acc-1g
90	Toyo Platform scale cap -10 kg acc-1g
91	Toyo Platform scale cap -5 kg acc-0.5g
92	Setra lab scale cap-400g acc-1 mg
93	Equipments for Field determination of CBR
94	Field Density test by Sand Replacement Kit complete
95	Field Density test by Core Cutter method Kit complete
96	Field Testing of CBR movable unit

97	Rapid moisture meter

23.0 Geotechnical Investigation and submission of Report

(A) **DETAILED SCOPE OF WORK**:
The geotechnical investigation work includes:

i) Drilling of 150mm dia bore holes in all kind of soil including laterite, gravel and cobble and NX size borehole in bouldery and rocky strata as specified in BOQ boreholes for RUB in lieu of LCs Bridge (upto 12m depth or - 5m in the refusal strata where SPT N value is more than 100, whichever is earlier.))
ii) Conducting Standard Penetration Test at every 3.0m interval starting from first sample at 1.5m depth or at the change of stratum as per **IS:2131.**
iii) Collection of disturbed, undisturbed soil samples and water samples and carrying out various laboratory testing as per relevant IS codes in consultation with Engineer-in-charge of DFCCIL Ltd.
iv) Collection of rock core samples and carrying out various laboratory testing as per relevant IS codes in consultation with Engineer-in-charge of DFCCIL Ltd.
v) Preparation of bore logs, location plans of boreholes, various test results, and calculations on computer by using suitable software.
vi) Investigation shall include data regarding removal of overburden by excavation, erosion or landslides, to give an idea of the amount of pre-consolidation the soils data has undergone. Similarly data regarding recent fill to be investigated to study the consolidation characteristic of the fill as well as original data.
vii) Submission of draft report in 3 copies and final reports in 5 copies including details of recommendation of suitable type of foundations with the safe Bearing Capacity.
viii) Safe bearing capacity is required for GAD of bridges including type of foundations and their dimensions including ground improvement.

(B) SPECIAL TECHNICAL SPECIFICATIONS TO BE FOLLOWED ARE AS UNDER:

Drilling of boreholes is required to be carried out in accordance with specifications of relevant codes of Bureau of Indian Standard as given below:

IS: 4078 Code of practice for indexing & storage of drill cores.
IS: 2131 Method for standard penetration test
IS: 1892 Code of practice for sub surface investigation for foundations.
IS: 6926 Diamond core drilling site investigation for river valley projects.
IS: 5313 Guide for core drilling observation.
IS 4464 code of practice for presentation of drilling information and core description in foundation investigation.
IS: 5529 (Part-I & Part-II) code of practice for in – situ permeability tests in overburden and rock respectively.

And any other relevant codes & specifications as decided by DFCCIL Engineer in charge, However it is reiterated that the above list is only for guidance and the firm is

responsible and shall furnish the list of specification that are followed in the above investigation.

(C) Following test shall be carried out for the sample collected from site :

a. Contractor shall note that all laboratory tests shall be conducted in the reputed laboratory or the laboratory approved by Engineer In charge by using approved apparatus complying with the requirements and specifications of Indian standards. If the sample is tested in their laboratory then adequacy of the laboratory must be certified by the engineer in charge.

b. Conducting Standard Penetration Test at every 3.0m interval starting from first sample at 1.5m depth or at the change of stratum as per IS: 2131.

c. Collection of disturbed, undisturbed soil samples and water samples and carrying out various laboratory testing as per relevant IS codes in consultation with Engineer-in-charge of DFCCIL Ltd.

(D) Tests on Undisturbed and disturbed Samples

a. Conducting Grain size analysis as per I.S 2720-(Pt.IV) both from SPT & UDS samples, plotting grain size distribution curves and calculating silt Factor.
b. By sieve analysis for grain size larger than 75 micron
c. By pipette method or Hydrometer method for grain size smaller than 75 micron.
d. Determination of specific gravity of soil as per I.S 2720(Pt-III) both from SPT & UDS samples.
e. Determination of liquid & plastic limits as per IS 2720 (Pt. V) both from SPT & UDS samples.
f. Determination of natural moistures content as per IS-2720 (Pt. III) both from SPT and UDS samples.
g. Determination of bulk unit weight as per IS-2720 (Pt. III) both from SPT and UDS samples.
h. Determination of initial void ratio of soil samples.
i. Determination of differential free swell index from UDS samples as per IS-2720 (Pt. 40)
j. Conducting consolidation test in terms of IS-2720 (PT.XV) and finding coefficient of consolidation, coefficient of permeability, coefficient of volume compressibility and various compression ratio.
k. Conducting Water Absorption Test on soil samples.
l. Conducting Direct shear test on cohesionless soil samples for determination of shear strength in terms of IS 2720 Pt. XIII.
i. **Note.** The type of test to be conducted for the soil type should be got approved from Engineer in Charge in advance.
m. Conducting Triaxial Test for all types of soils under appropriate conditions of drainage, consolidation and with/without measurement of pore pressure for the type of soil under consideration for determination of shear strength parameters of specimen in terms of IS-2720 (Pt. X, XI, XII).
i. **Note:** The type of test to be conducted for the soil type should be got approved from Engineer in Charge in advance.
n. Determination of prosity of Rock samples as Per IS 13030

o. Preparation of rock specimen as per I.S. specification for conducting compression tests.
p. Determination of compressive strength of rock samples by point load strength method as Per IS: 8784 or unconfined compressive strength as per IS: 9143 (1 set will comprise of 10 No. of samples) as directed by Engineer-in-Charge.
q. Conducting Petrographic examination of Rock samples as per IS: 2386 PT VII, VIII.

(E) The lab test report should clearly indicate the following properties of soil and rock:-

(I) For soil

a. Engineering properties of soil/rock.
b. The location and extent of rock layer and other weak features.
c. Soft pockets if any under the hard founding strata.
d. The geological features like type of rock, fault, fissures etc.
e. Ground water table.
f. Artesian condition, if any.
g. The depth and existence of scour.
h. The bearing capacity for foundation.
i. Probable settlement and probable differential settlement of the foundation.

(II) For Rock

a. Depth of rock strata and its variation over a site.
b. Whether isolated boulder or massive rock formation.
c. Extent and character of weathered zone.
d. Joint frequency in the rock.

(F) Plate load test

Conducting in-situ full size Plate Load Test (PLT) at selected location as per IS:1888 including making loading arrangements & casting of RCC/cast in-situ concrete footing as per codal provisions including excavation and refilling of trial pit with plate size 60cm x60 cm.

24.0 SUPPLY OF CEMENT

(A) Cement for use in the work should be procured by the contractor from the main producers/their authorized dealers authorized stock yards which should confirm to BIS Specification.

(B) The cement bag supplied by the contractor preferably in proper bag packings should bear the following information in legible marking.

(i) Manufacturers name :
(ii) Registered trade mark of manufacturer, if any :
(iii) Type of Cement.
(iv) Weight of each bag in Kgs. or No. of bags per tonne.
(v) Date of manufacture, generally marked which of the year/ year of manufacturer e.g. 30/13 which means 30th week of 2013.

(C) Test certificate for the manufacture should be produced by the contractors which should conform to the relevant specification.

(D) DFCCIL may also take sample during the course of the work and get the cement tested to ascertain their conform it to specification. The cost of testing shall bear by the contractor.

(E) When such sampling is done it should be as per IS specification.

(F) Test of cement.

(i) Testing of the sample of cement shall be carried out in the field laboratory as given below.

(ii) Tests on cement to be as per IS-4031 which may be carried out are.
(a) Compressive Strength.
(b) Initial and final setting time.
(c) Soundness.

(G) Expiry period of Cement

(i) Cement older than Three months i.e. 13 weeks from the week of manufacturing shall not be used for the work. e.g. cement manufactured in 30/13 (30^{th} week of year 2013) shall not be used after 42/13 (42^{nd} week of 2013).

(ii) If the cement get set due to improper storage and/or coming in the contact of moisture due to any reason before the work or in the laboratory test the compressive strength is found less than the specified value then the cement shall be treated as 'Expired' and shall not be used even if the three months time has not been expired.

(H) List of Manufacturers/Supplier of Cement – L&T, ACC, Birla, Gujrat Ambuja, JP Cement.

25.0 SUPPLY OF REINFORCEMENT STEEL

(A) For plain and reinforced cement concrete (PCC and RCC) works, the reinforcement shall be as per provisions of relevant codes.

(B) All Reinforcement steel (TMT Bars) shall be procured as per specifications mentioned in IS-1786 with up to date amendments.

(C) These steel shall be procured only from those firms, which are established, Reliable and primary producers of steel having integrated steel plant(ISP), using iron ore as the basic raw material and having in house iron rolling facilities, followed by production of liquid steel, as per Ministry of steel's (Government of India) guidelines. **Approved Supplier of Reinforcement steel will be – TISCO, ISSCO, SAIL, RINL. JINDAL.**

(D) The contractor will have to submit the manufacturer certificate for each lot of steel brought at site.

(E) All reinforcing steel shall be free from loose small scales, rust and coats of paint, oil mud etc. Every bar shall be inspected before assembling on the work and defective, brittle or burnt bar shall be discarded. Cracked ends of bars shall be discarded.

(F) Test shall be carried out in site laboratory or third party test for to confirm the quality of reinforcement as per specification. Contractor shall bear the cost of all test.

26.0 EARTHWORK, SUBGRADE AND BLANKETTING FOR EMBANKMENT

1.0 Embankment

1.1 General

(1) Scope

This work shall consist of the construction of embankment on approach of RUB which is affected due to construction of RUB by furnishing, placing, compacting and shaping suitable material of acceptable quality obtained from consented sources in accordance with these Specifications, and to the lines, levels, grades, dimensions, and cross-sections shown on the Drawings and as required by the Engineer.

(2) Railway Formation

Width of top of Formation 14.50 metre

(3) Geometrical Requirements for the Soil Formation should generally meet the following requirements:

(i) Cross fall slope to be at least 1:30 or 3% from center of the embankment towards cess / drain side (both side) in double lines. Cross slopes shall be provided at top of blanket, at top of prepared subgrade, at top of embankment fill and at berm

(ii) Finished soil surface to be in level in longitudinal direction (< = 20 mm on a longitudinal base of 4m), must not show hollow pits, road vehicle traffic ruts

1.2 Embankment Fill Materials

(1) Embankment Fill shall be constructed of materials as per "Guidelines and specifications for design of formation of Heavy Axle Load , (Report No.RDSO/2007/GE:14").

(2) Selection of Blanket Material

(i) Proper survey of area close to Embankment site, at different locations needs to be carried out to identify suitable sources for blanket material required. Aim of such source identification survey is to use naturally available material, which is cheap and conforms to the specifications laid down.

(ii) If, naturally available materials do not meet the desired specifications, blanket material can be produced by mechanical process from crushing or blending method or combination of these two methods. However detailed methodology of blending to be adopted to produce large quantity of blanket material with consistent quality, shall have to be laid down. Trials (theoretical and laboratory) for blending to judge the final product shall have to be carried out & shall be subject to consent of the Engineer. Naturally available sand, quarry dust or crusher run, if available, can be used as prepared subgrade also.

(iii) Quarry dust or material specifically manufactured through crushers using boulders, rocks, etc. as raw material, conforming to the blanket material specification may also be used as blanketing material.

(iv) In any case, before planning for use of any material for formation of blanket/sub-grade, Engineer's specific approval is to be taken for the use of that particular material and also for the location from where such material will be quarried / sourced.

1.3 Ground Improvement

Where required, for guidance on Ground Improvement Techniques, Annexure-1 of "Guidelines and Specifications for Design of Formation for Heavy Axle Load (Report No. RDSO / 2007 / GE: 14)" will be followed.

1.4 Execution

(1) Field Trials

(i) Field trial for compaction on a test section shall be conducted on fill material to assess the optimum thickness of layer and optimum number of passes for the type of roller planned to be used to arrive at desired density. Procedure for field compaction trials as given in Annexure – IV of 'Guidelines for Earthwork in Railway Projects - July 2003, Report No. GE: G-1" issued by RDSO may be referred for guidance.

(ii) If the soil has less than required moisture content, necessary amount of water shall be added to it either in borrow pits or after the soil has been spread loosely on the embankment. Addition of water may be done through flooding or irrigating the borrow areas or sprinkling the water on the embankment through a truck mounted water tank sprinkling system. Use of hose pipe for water need to be avoided.

(iii) If the soil is too wet, it shall be allowed to dry till the moisture content reaches to acceptable level required for the compaction.

(iv) Placement moisture content of soil should be decided based on the field trial and site conditions. The objective should be to compact at OMC to achieve uniform compaction with specified density in most efficient manner.

(2) Preparation of foundation for embankment

(i) Prior to placing any embankment upon any area, all clearing and grubbing operations shall be completed in accordance with Clause 4.6: Clearing and Grubbing of these Specifications.

(ii) Natural ground / sub-soil Strata shall be prepared to receive the placement of first layer of the Embankment.

(iii) In case where the embankments are to be constructed on ground having slopes or along the existing embankments of Indian Railways requiring widening,

a) All vegetation shall be uprooted and taken away from the site of work. The loose material removed from the slope should be dumped to form the bottom most layer on the ground in width to be widened. If required, it shall be supplemented with granular soil.

b) Starting from toe, the benching on the slopes at every 300mm height shall be provided on slope surface so as to provide proper amalgamation between the old and new earthwork.
c) Material which has been loosened shall be re-compacted simultaneously with the first level of embankment material placed. It should be ensured that there is no humus material left on the benched slope.

d) Care shall be taken to avoid entry of rain water in to the formation from this weak junction which otherwise would result in development of weak formation, slope failure & unevenness settlement.

(iv) In case of the Embankment in swamps or water the Contractor shall excavate or displace swamp ground / water and backfill with suitable material. Backfill will be in accordance with the same provisions as for embankment unless otherwise directed by the Engineer.

(v) If unsuitable materials occur in some areas under the embankment or in existing embankments, such materials shall be removed to levels as consented by the Engineer, the bottom of the excavation shall be compacted, as described above, and the areas backfilled and compacted layer by layer with suitable material.

(vi) All compaction shall conform to the requirements as specified in the subsequent paras herein below of these Specifications.

(3) Placing embankment

Embankment shall be placed in accordance with the following requirements:
(i) General
Except as otherwise required by the Engineer, all embankments shall be constructed in layers approximately parallel to the finished grade of the railway track. During construction of embankment, a smooth grade having an adequate crown or super-elevation shall be maintained to provide drainage. Embankment shall be constructed to the required grade, and completed embankment shall correspond to the shape of the typical sections shown on the Drawings.

(ii) Earth Embankment

Earth embankment shall be defined as those principally of material other than rock, and shall be constructed of consented material from designated or other consented sources. Earth embankment shall be constructed in successive layers, for the full width of the cross-section and in such lengths as are suited to the compaction and watering methods used.

(iii) Adjacent to Culverts and Bridges

Embankment adjacent to culverts and bridges which cannot be compacted by use of equipment used in compacting, the adjoining section of embankment shall be compacted in the manner prescribed under the Section 5.8: Excavation and Backfill for Structures. Embankment placed round spill through type abutments shall be compacted such a manner as to maintain approximately the same elevation on each side of the abutment and each layer of material shall be mixed, wetted and compacted as specified herein.

(iv) Preparation of Subgrade

a) The surface of the finished subgrade shall be neat and workmanlike and shall have the required form, super elevation, levels, grades, and cross-section. The surface shall be constructed to the specified accuracy to permit the construction of subsequent layers of material to the thickness, surface tolerance, and compaction as specified.

b) As far as is practicable and when directed by the Engineer, the Contractor shall construct the Embankment fills as early in the Contract period as possible to allow for consolidation of the embankment during the remainder of the Contract period.

c) Clods or hard lumps of soil of borrow area shall be broken before placing on embankment

d) Suitable thickness of soil of each layer is necessary to achieve uniform compaction. Layer thickness depends upon type of soil involved and type of roller, its weight and contact pressure of its drums. Normally, 200 mm to 300 mm layer thickness is optimum in the field for achieving homogenous compaction. However for determination of optimum number of passes for a particular type of roller and optimum thickness of layer at a predetermined moisture content, a field trial for compaction is necessary as per IS: 10379 – 1982 and Heavy Compaction Test as per IS; 2720 However as a good practice, thickness of layer should be generally kept as 300mm for fill material and 250mm for blanket material in loose state before compaction.

e) Where streams or ditches are to be diverted, or abandoned, their beds should be filled up to a level as consented by the Site Incharge. Within the limits of earthwork, such fill shall be placed and compacted to the requirements as specified in this Section. Filling shall be performed well ahead of the construction of the embankments, and all other works involved such as pumping, damming, etc. Embankment fill placed against the sides of pipe culverts shall be placed in such manner as to maintain the same elevation on both sides of the culvert.

f) The DFCCIL may request the installation of settlement plates, piezometers, lateral movement stakes, inclinometers or other settlement control devices if required by the DFCCIL for monitoring purpose.

g) In case of rainfall during construction of formation, care should be taken that rain cuts are not allowed to develop wide and deep. The such rain cuts should be attended to / repaired as a regular measure.

h) All settlement occurring in embankment construction shall be corrected by the Contractor by providing additional layers of embankment or selected material. The Contractor shall be fully responsible for the stability and integrity of the embankment during the Contract and Maintenance periods.

i) If a soil failure either occurs or becomes imminent during the construction of the embankment, the DFCCIL shall have the authority to suspend all embankment construction in the affected area until corrective measures can be determined and implemented. Any delay in the embankment construction schedule and any other effects caused by implementation of the above clause shall not constitute grounds on the part of the Contractor for a claim for extension of the Contract and/or financial compensation.

(4) Use of Mixed Types of Soils

(i) Different types of fill materials, if used, should be deposited in such a way that parts of the site receive roughly equal amount of a given material in roughly the same sequence to get approximate homogeneous character of sub-grade.

(5) Compaction of embankment

(i) Embankments shall be constructed in layers of uniform thickness as specified. The spreading of material in layers of desired thickness over the entire width of embankment should be done by mechanical means and finished by a motor grader. The motor grader blade shall have hydraulic control suitable for initial adjustment and maintain the same so as to achieve the slope and grade.

(ii) Each layer sloping out as per specifications and compacting it mechanically using vibratory rollers.

(iii) Thickness of the layer is decided based on field compaction trials.
(iv) If natural moisture content (NMC) of the soil is less than the OMC, calculated amount of water based on the difference between OMC and NMC and quantity of earthwork being done at a time, should be added with sprinkler attached to water tanker and mixed with soil by motor grader or by other means for obtaining uniform moisture content. When soil is too wet, it is required to be dried by aeration to reduce the moisture content near to OMC.

(v) The rate of progress should be uniform so that the work is compacted to the final level almost at the same time.

(vi) Each layer should be compacted with recommended type of roller upto required level of Compaction, commencing from the sides, before putting up next upper layer.

(vii) Each layer of the embankment fill shall be compacted to a dry density equal to at least 97% of the maximum dry density of the material.

(viii) Each layer of the prepared subgrade fill shall be compacted to a dry density equal to at least 98 % of the maximum dry density of the material.

(ix) Each layer of the Blanket Material fill shall be compacted to a dry density equal to at least 100 % of the maximum dry density of the material.

(x) Each layer of material shall be compacted uniformly by use of adequate and appropriate compaction equipment as consented by the Employer after field trials for compaction. The compaction shall be done in a longitudinal direction along the embankment.

(xi) At the end of the working day, fill material should not be left uncompacted. Care should be taken during rolling to provide suitable slope on top of the bank to facilitate quick shedding of water and avoid ponding on formation.

(xii) Care shall be taken that the rain cuts are not allowed to be developed wide and deep, otherwise these locations will remain weak spots. Contractor should attend / repair such rain cuts as a regular measure.

(xiii) Top of the formation should be finished to cross slope of 1 in 30 from one end to other towards cess / drain in multiple lines and from centre of the formation to both sides in single line.

(xiv) At locations where the water table is high and the fill soil is fine-grained, it may be desirable to provide a granular layer of about 300 mm thickness at the base, above subsoil across the full width of formation.

(xv) The Contractor shall protect the prepared subgrade from both his own and public traffic. Once the top surface of the formation has been finished to proper slope and level, movement of material vehicles for transportation should be avoided on the surface, as this will cause development of unevenness & ruts on the surface which shall accumulate water and weaken the formation. The Contractor shall maintain the subgrade by watering and rolling as frequently as necessary to preserve the subgrade in a completely satisfactory condition as specified above.

(xvi) Embankments shall be maintained to the grade and cross-section shown on the Drawings throughout the contract period.

(xvii) Attention is drawn to the fact that the general compaction requirements shall at any level apply to the full width of the embankment. Slopes to be covered with topsoil and grassing shall have a firm surface before topsoil is placed.

(xviii) At places where embankment materials are not conducive to plant growth, top soil obtained from site clearance as well as top layer of borrow area, which is rich in organic content and suitable for plant growth, may be stored for covering slopes of embankment & cutting after construction or other disturbed areas where re-vegetation is required.

(6) Preparation of subgrade surface

The subgrade shall be shaped to correct line and level and the Contractor shall at all times ensure that the subgrade is well drained and protected against damage from public as well as construction traffic.

1.50 Slope Protection / Erosion Control

Suitable and cost effective slope protection / erosion control system (Vegetation based) considering soil matrix, topography and hydrological conditions to protect the side slopes of Embankment / Formation in Cutting should be provided with the consent of Engineer. System shall consist of supplying & laying a layer of fertile top soil having capability to support vegetation on the exposed slopes. Vegetation may be done in accordance with any of methods as described in Clause 4.2, 4.3 & 4.5 of "Guidelines on Erosion Control and drainage of Railway Formation (Guideline No. GE: G-4)" as issued by RDSO.

1.60 Quality Check on Earthwork : Quality of execution of formation earthwork shall be controlled through exercise of checks on the borrow material, blanket material, sub-garde material compaction process, drainage system, longitudinal & cross sectional profiles of the embankment.

(i) Tests for Selection of Soil:

a) For selection of soil to be used as embankment fill, CBR test shall be conducted on material. CBR is conducted on ground soil, embankment fill, sub-grade & blanket material to ensure the minimum specified CBR value of these material to be used in construction. This test is carried out on soil sample in laboratory as per procedure given in IS: 2720 (Part 16) – 1987 and in field as per IS: 2720 (part 31) – 1969.

b) Other tests to be conducted are soil classification / sieve analysis, OMC, NMC NDD etc as per IS: 2720.

c) Heavy Proctor Test is required to be conducted to determine the Maximum Dry Density of soil as per IS: 2720 (Part 8).

d) In case of slope stability analysis, triaxial test will also be done to find the effective shear parameters.

Any other test as considered necessary / as required by the Engineer.

(ii) Tests for Blanket / Prepared Sub-grade Material

a) The source of blanket material shall be identified based on the tests & studies conducted for conforming the material to the required specifications viz. Particle Size Distribution, % fine, Los Angles Abrasion, Cu, Cc, CBR, Filter criteria, γmax, γmin or OMC & MDD etc.

(iii) Tests on Compacted Layer: Quality assurance tests are required to be conducted on part completion stages of formation, prior to clearing for further earthwork / blanketing work etc.

a) In-situ density is measured in the field by Sand Replacement method as per IS: 2720 (Part 28) or Core Cutter Method as per IS: 2720 (Part 29) to calculate the degree of compaction. This shall be determined in laboratory as per BIS Procedure with specified frequency of earth work quantity.

b) Method of Sampling : For each layer, a minimum of one sample at a predetermined interval along centre line of the alignment would be taken in a staggered pattern so as to attain a minimum frequency of tests as specified herein below. For subsequent layer, the stagger should

be such that the point of sampling does not fall vertically on the earlier sampling points of the layer immediately below. In case of bank widening / for the embankment adjoining the existing embankment, the sampling shall be done at an interval of minimum 200 meters on the widened side of the embankment.

(3) Frequency of Quality Assurance Tests

Frequency of tests shall be as per RDSO/IRS/IS codes/specifications.

1.70 Tolerances and Acceptance Criteria

(1) Soil Formation should meet the following requirements:

(i) The cross fall slope to be at least 1:30 or 3% with tolerance of 0.5%

(ii) The finished top levels of soil formation should be within ± 30 mm

(iii) The finished top of blanket layer shall be permitted to have variation from design level by + 25mm

(2) For Compacted earth and Blanket Layer:

(i) Formation width should not be less than the specified width.

(ii) Side Slopes should in no case be steeper than specified/ designed side slopes. Provision of Berm Width should not be less than the specified/ designed width.

27.0 **CEMENT CONCRETE**

(A) General :-

The rate for cement concrete/reinforced cement concrete items of work include cost of all materials (except cement, steel and shuttering) including, labour, transports, leads, lifts, descents, all handling curing, vibrating, staging, tools and plants and all incidentals etc. complete. No deduction will be made from the quantity of concrete for the volume occupied by steel reinforcement. Formworks shall be made of steel. All concreting shall be done in absolutely water tight conditions. No admixtures or adhesives to concrete shall be used without the prior approval of the Engineer. If at all such contingency arises, no extra payment shall be made for such approved admixtures. Nothing extra will be paid for mechanical vibrations with needle vibrator including vibration by high frequency external vibrator or shutter vibrator where ever directed. IRS/IS codes of practice shall be followed as directed by the DFCCIL and where the above code/specification are not explicit, directive of DFCCIL shall be final and binding to the contractor in all matters of execution of works for which no additional claim of payment shall be entertained.

(B) Concrete shall conform to the strength and grade as shown in drawing or in relevant schedule of items. Controlled concrete shall be based on mix design carried out by the contractor at his cost and duly approved by the DFCCIL. Cement required for carrying out mix design shall be arranged by the contractor at his own cost. The controlled

concrete shall be weight batched. The concrete shall be machine mixed. No concrete shall be poured before reinforcement is checked and approved by the DFCCIL. The contractor shall arrange for testing of concrete as per relevant IS codes at no extra cost and submit test result immediately after tests are carried out. He shall maintain full records of all tests. In addition to the tests carried out by the contractor, DFCCIL reserve the right to take tests samples and test them as deemed necessary. No payment will be made for concrete for such samples.

(C) Quality Control :-

Ensuring the required standard quality of RCC members is a must. The most important factors to be ensured by the contractor to this connections are :-

a) Deputing qualified personnel at all stages of construction.
b) Testing and inspection of various materials selected for use.
c) Proper control of dimensions and tolerance.
d) Proper proportioning and adequate mixing of concrete.
e) Proper handling, placing and consolidation of concrete.
f) Proper curing.
g) Through documentation.
h) Release of side forms as soon as possible.

(D) Inspection of work done :-

In general, the scope of inspection to be performed in RCC works shall include the following :-

a) Identification, examination acceptance and laboratory testing of materials.
b) Checking of dimensions of members, position/layout of reinforcing steel, other important materials, adequacy of formwork/shuttering etc.
c) Checking up of clearance and lever arms for reinforcements.
d) Periodical inspection of batching, mixing, conveying, placing, compacting, finishing and curing of concrete.
e) Preparation of concrete specimens for tests and performing of tests for slump, cube strength etc.

(E) Record Keeping :-

In order to establish evidence of proper manufacture and quality of RCC works, a system of records as mentioned below shall be maintained by the contractor. Two copies of records shall be made and one copy duly signed by the contractor shall be handed over to the Site Incharge.

a) Date, time and duration of casting.
b) Mix proportion.
c) Mixing water (corrected for moisture in aggregates).
d) Cube identification.
e) Slump.

(F) List of Manufacturers/Supplier

a. Admixtures – FOSROC, MBT(Degussa), Asian Lab, MC Baucheme, Chembond, Sika, Chauksey.
b. Formwork Release Agent - FOSROC, MBT, MC Baucheme, CICO.

(28) **QUALIFIED TECHNICAL PERSONNEL TO BE DEPLOYED**

1. Following technical personnel should be deployed by the contractor for execution of the work. This requirement is minimum and contractor has to deploy additional personnal as per requirement at site.

   i. Graduate in Civil Engg – 02 Nos.
   ii. Diploma in Civil Engg – 04 Nos.
   iii. ITI or B.Sc having knowledge of various test to be conducted at laboratory and site - 03 Nos

3. Technical personnel deployed at site Should be able to read and understand all relevant drawings connected with the work. They should be conversant with the relevant standards and code.
4. CV of the Technical personnel mentioned above should be submitted by the contractor with attested photocopies of certificates for approval of DFCCIL.
5. At any stage during the progress of work if performance of Technical personnel deployed by the contractor is found unsatisfactory, DFCCIL may order to remove the personnel from the site. After issue of such order the concerned personnel shall not be entitle to present on site or deal with any matter connected with this work. Contractor shall provide replacement of removed personal within a period of 03 weeks. CV of personnel proposed for deployment in replacement of removed personal shall also be submitted to DFCCIL for approval.
6. If any Technical personnel leave the assignment, contractor shall provide replacement of such personal within a period of 01 weeks. CV of personnel proposed for deployment in replacement of such personnel shall be submitted to DFCCIL for approval.
7. If Contractor fails to deploy qualified personnel as mentioned above, contractor shall be liable to pay the amount as under

   1. Graduate in Civil Engg– Rs 40,000 per month or part thereof per person
   2. Diploma in Civil Engg – Rs 25,000 per month or part thereof per person.
   3. ITI or B.Sc having knowledge of various test to be conducted at laboratory and site – Rs 15,000 per month or part thereof per person

(29) DEPLOYMENT OF MACHINARY AND PLANT

Following Plant and machinery and infrastructure should be deployed / provided by the contractor for the work. These machinery may be hired by the contractor as per requirement of work.

1. Concrete Batching Plant
2. Transit Mixer – 03 Nos.
3. JCB – 02 Nos.
4. Grader – 01 Nos.
5. Dumper with hydraulic arrangement – o2 Nos. (Min)
6. Crane – 100 T capacity – 01 (Min).
7. Trailer – 01 No. (Min.)
8. Water Tanker / Sprinkler – 02 Nos.
9. Casting Yard for casting of RCC Box as approved by DFCCIL.
10. Sand Screening machine in casting yard.
11. Crane with adequate facility in casting yard for handling of shuttering / deshuttering of RCC Box and other work.
12. Proper arrangement for stacking of Cement / Reinforcement in casting Yard.
13. Reinforcement cutting and bending machines – adequate Nos.
14. Water arrangement in casting yard as well as at RUB site.
15. Shuttering plates and props with coupler – adequate Nos.

(30) Deduction of Taxes at sources as per provisions of the respective states.

In compliance with the prevailing law the DFCCIL shall deduct VAT from each running bill and deposit the same in treasury of respective Government and any adjustment of document of deduction to be made in final bill. The % of deduction will vary as per the directives of the State Govt.

(31) **Disaster Management Clause of Contract :-**

1. The tenderer/contractors are to furnish list of vehicle and equipments as per Performa given below for making readily available to the Railway Administration in case of accidents/natural calamities involving human lives.

Name of contractor	EQUIPMENTS viz. JCB etc.			VEHICLES viz. Truck,Tipper etc.		
	Name of EQUIPMENTS	Location where generally parked	Contact persons (name, place and telephone no.)	Name of VEHICLES	Location where generally parked	Contact persons (name, place and telephone no.)

(32) Eligibility Criteria :-

(i) Technical Eligibility Criteria - The tenderer should have completed at least one similar single work, for a minimum value of 35% of advertised tender value of work in the last three financial years (i.e. current year and three previous financial years).

(ii) Financial Eligibility Criteria - Total Contract amount received during the last three years and in the current financial year should be a minimum of 150% of the advertised tender value of work.

(iii) The complete tender document consists of two parts i.e. **Part-I (Technical Bid document) & Part-II (Price Bid document).** After completing the tender documents they should be separately sealed in two different envelopes super scribed as **Packet-I (Technical Bid) and Packet-II (Price Bid)** along with name of work, the Tender No. and these two envelopes should be sealed in a larger envelope super scribing the name of work & Tender No.

(iv) The following documents should be specified for submission along with tender :

a) List of Personnel, Organization available on hand and proposed to be engaged for the subject work.

b) List of Plant & Machinery available on hand (own) and proposed to be inducted (own and hired to be given separately) for the subject work.

c) List of works completed in the last three financial years giving description of work, organization for whom executed, approximate value of contract at the time of

award, date of award and date of scheduled completion of work, Date of actual start, actual completion and final value of contract should also be given.

d) List of works on hand indicating description of work, contract value, and approximate value of balance work yet to be done and date of award.

Note: -

1) In case of items (c) and (d) above, supporting documents/certificates from the organizations with whom they worked/are working should be enclosed.

2) Certificates from private individuals for whom such works are executed/being executed shall not be accepted.

3) Similar Nature of works for this Tender will be **"Any Minor/Major Bridge works involving Concrete works"** only.

Special attention

Note: (i) The tenderer(s) should submit the requisite credentials along with the tenders failing which, the tender will be rejected without any further communication.

(ii) Unregistered partnership deed will not be accepted for consideration.

(iii) No credentials will be asked by the DFCCIL to submit after opening of tender.

3. Eligibility criteria for works tender in respect of partnership firms.

(i) In case the tenderer is a partnership firm(s), the experience, solvency and turn over shall be in the name and style of the firm only.

(ii) If the tenderer is a partnership firm, all the partners shall be jointly and severally liable for successful completion of the work and no request for change on the certification of the firm shall be entertained.

(iii) During the currency of the contract, no partner of the firm shall be permitted to withdraw from partnership business and in such an event; it shall be treated as breach of trust and abandonment of the contract.

(iv) **JOINT VENTURE** will not be allowed in this tender.

(v) Any conditional offer will be summarily rejected.

(2) The tenderer(s) whether sole proprietor, a limited company or a partnership firm he/they should submit authentic proof in terms of partnership deed, proprietorship documents etc. along with the tender. If he/they want to act through agent or individual partner(s) should submit a power of attorney duly

stamped and authenticated by Notary Public or by Magistrate in favour of specific person whether he/she/they are partner(s) of the firm or any other person specifically authorizing him/her/them to submit the tender, sign the agreement, receive money, witness measurements, sign measurement books, compromise, settle, relinquish any claim(s) preferred by the firm and also sign "No Claim Certificate" and refer all or any disputes to arbitration.

33. The work has to be carried out near to existing Indian Railway Track (ECR) and may require speed Restriction and / or traffic and power block. It will be the responsibility of contractor to get the sanction of concerened Railway officials. The DFCCIL shall coordinate with the Railway official to obtain sanction for speed restriction and /or Traffic & Power block, but non availability of speed restriction and /or Traffic & Power block shall not be the ground for any time extension and it shall not be considered as employers' obligation. No claim from contractor will be admissible.

34. Required Traffic & Power block, as agreed by DFCCIL, will be arranged on DFC track for carrying out the work. Contractor has to submit detail programme for each RUB for approval of DFCCIL.

Dated :- **Signature of tenderer/s**

ANNEXURE – I

TENDERER(S)'S GENERAL INFORMATION		PROOF ATTACHED AT PAGE
1. Name of firm.		
2. Full name of Contractor/s:		
3. Year of Establishment.		
4. Registered Head Office :-Address: -		
5. Operation Address if different from above:		
6. Branch Office in India:		
7. Constitution of firm give full details including name of Partners/Executive/s power of Attorney holders etc.		
5. Particulars of Registration with Government Semi-Government Organization, Public sector under-Taking and local bodies etc.		
6. Bank A/C No of Firm with RTGS code for electronic clearance of the payment 7. Telephone Number		
8. E-mail address & Web Site		
9. Telefax Number		
10. ISO Certification, if any		
{If yes, please furnish details}		
11. Pan No:		
12. PF / EPF Registration No:		
13. Service Tax Registration No:		
1. The information furnished above shall be supported by authentic documents including registration number of the firm. 2. The copies of documents submitted shall be duly attested by a Gazetted officer.		

Signature of the Tenderer/s: -

ANNEXURE – II

Self Certificate

a. I/We have downloaded the tender form from the internet site www.dfcc.in and www.dfccil.org. and I/we have not tampered/ modified the tender documents in any manner. In case the same is found tampered/modified, I/We understand that my/our offer shall be summarily rejected and I/we are liable to be banned from doing business with the DFCCIL and/or prosecuted as per law.

b. I/we are submitting a demand draft No……. dated …….issued by ……..or original money receipt No …… deposited with …….station for Rs.. …… towards the cost of tender form.

c. I/We certified that I/we am/are not black listed or debarred by DFCCIL or Railways or any other Ministry/Department of the Government of India/State Government from participation in tenders/contract on the date of opening of tenders/Tenders.

Signature of the Tenderer/s:

Annexure - III

FORM OF IRREVOCABLE GUARANTEE BOND FOR PERFORMANCE GUARANTEE (PG).

(The Bank Gaurantee(BGs) to be submitted by the suppliers/ contractors should be sent directly to "Chief Project Manager; DFCCIL, Mughalsarai, Shyama Kunj, Plot no 122/1, Narainpur By Pass, Post- Nayapura, District- Varanasi.**" by the issuing Bank under Registered Post A. D.).**

To.
Chief Project Manager;
DFCCIL;
Shyama Kunj, Plot no. 122/1,
Dafi, Narainpur bypass,
Post –Nayapura,
District - Varanasi

In consideration of the Chief Project Manager; DFCCIL (hereinafter called " DFCCIL") having agreed to accept from……...……hereinafter called "the said Contractor/s"), under the terms and conditions of an Agreement/ Acceptance letter dated….....…..…made between……and...……...……(hereinafter called "the said Agreement")the Performance Guarantee for the due fulfillment by the Contractor/s of the terms and conditions in the said Agreement on production of Bank Guarantee for Rupees……..……..…only). We, ……....…(indicate the name of the Bank hereinafter referred to as "the Bank") at the request of ..... ……contractor/s do hereby under take to pay the Government an amount not exceeding Rs..... …….against any loss or damage caused to or suffered by or would be caused to or suffered by Government by reason of any breach by said Contractor(s) of any of the terms or conditions contained in the said Agreement.

1. We……indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on demand from the DFCCIL stating that the amount claimed is by way of loss or damage caused to or suffered by the DFCCIL by reason of breach by the said contractor/s of any of the terms or conditions contained in the said agreement or by reason of the contractor/s failure to perform the Agreement, any such demand made on the Bank shall be conclusive as regards the amount due and payable to the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. ……..……

2. We under take to pay to the DFCCIL any money so demanded notwithstanding any dispute or disputes raised by contractor(s)/ suppliers(s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractors(s)/ supplier(s) shall have no ……..…….against us for making such payment.

3. We, ……(indicate the name of the bank) 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, including Maintenance/ Warrantee Period, and it shall continue to be enforceable till dues of the DFCCIL under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till

   ……office/Department/ DFCCIL certifies that the terms and conditions of the Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharged this guarantee, unless a demand or claim under this guarantee is made on us in writing on or before the …….. we shall discharge from all liability under this guarantee thereafter.

4. We, ……(indicate name of the Bank) further agree with the

   DFCCIL that the DFCCIL shall have the fullest liberty without our consent and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone from any time or from time to time any of the powers exercisable by the DFCCIL against the said contract and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the contractor/s or for any forbearance act or omission on the part of the DFCCIL or indulgence by the DFCCIL to the said contractor(s) or such any matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

5. This guarantee will not be discharged due to change in the constitution of the bank or the Contractor(s)/ Supplier(s).

6. We, ……(indicate the name of Bank) …….undertake not to revoke this guarantee during its currency except with the previous consent of the DFCCIL in writing.

Dated this ……day of……..2013

.

For. _____

(Indicate the name of the Bank)

Signature of Tenderer(s)

Annexure - IV

FORM OF AGREEMENT
(To be executed on requisite value of stamp papers)

AGREEMENT

THIS AGREEMENT made on _____ day of _____ (Month/year) between DFCCIL, acting through Chief Project Manager, DFCCIL, **Plot No. 122/1, Dafi (Varanasi – Mughalsarai bypass) Post – Naipura, Varanasi** (herein after called the "DFCCIL")of the one part and (Name / address of the contractor) (herein after called the contractor) of the other part.

WHEREAS the DFCCIL is desirous that certain works should be executed by the Contractor viz. Contract No. _____ (hereinafter called "the works", and has accepted a Bid by the Contractor for the execution and completion of such works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meaning as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement:
    a) Letter of Acceptance of Tender
    b) Notice Inviting Tender
    c) Instructions to the Tenderers
    d) Conditions of the Contract
    e) Schedule of approximate quantity
3. In consideration of the payments to be made by the DFCCIL to the contractor as hereinafter mentioned, the contractor hereby covenants with the DFCCIL to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The DFCCIL hereby covenant to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement executed the day and year first before written.

(Name, Designation and address of the signatory)

Signed for and on behalf of
the Contractor in the presence
of: Witness:

(i)

1.

(Name, Designation and address of the authorised authorised signatory)

Signed for and on behalf of the DFCCIL
in the presence of:
Witness:

1.

2.

Name and address of the witnesses to be indicated.

Annexure V

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 THE DFCCIL EXCEPT THE NAMES MENTIONED HEREIN UNDER :

1……..

2……..

3……..

AND SO ON …….

NOTE:- NAMES, DESIGNATION, NAME OF OFFICE, HEADQUARTER OF THE TENDERER(S)'S RELATIVE IN DFCCIL TO BE MENTIONED BY THE TENDERER(S)/TENDERER(S)S IN 1,2,3 AND SO ON ABOVE.

SIGNATURE OF TENDERER(S)/TENDERER(S)S

Annexure-VI

Details of works completed in last three financial years including current financial year

S. No	Name of Work	Acceptance letter no	Date of Acceptance letter	Organization for whom work is being done	Final Cost of Work	Date of commencement of Work	Date of Actual completion of Work	Certificate /Credential available at Page No	Remarks
1	2	3	4	5	6	7	8	9	10

NOTE:-

The tenderer/s must attach performance certificate issued by the organizations for whom the work was carried out.

The information furnished above shall be supported by authentic documents with page no mentioned clearly above. The copies of documents submitted should be duly attested by a gazetted officer.

Signature of the Tenderer/s: -

Annexure-VII

Details of works under progress in last three financial years including current financial year

S. No	Name of Work	Acceptance letter no	Date of Acceptance letter	Organization for whom work is being done	Final Cost of Work	Date of commencement of Work	Date of Actual completion of Work	Certificate /Credential available at Page No	Remarks
1	2	3	4	5	6	7	8	9	10

NOTE:-

The tenderer/s must attach performance certificate issued by the organizations for whom the work was carried out.

The information furnished above shall be supported by authentic documents with page no mentioned clearly above. The copies of documents submitted should be duly attested by a gazetted officer.

Signature of the Tenderer/s:

END OF PART-I (TECHNICAL BID)

Part-II

Price Bid document

(SPECIAL NOTE -ALL THE QUOTED RATES AND AMOUNT SHALL BE LAMINATED BY THE TENDERER)

Note –

1. After completing the tender document Part-II, it should be separately sealed in an envelopes super scribed as **Packet-II (Price Bid)** along with name of work and Tender no**..**
2. The part-I of tender document should be separately sealed in another envelop super scribed as **Packet-I (Technical Bid)** along with name of work and Tender No.
3. **These two envelopes** should be sealed in a larger envelope super scribing the name of work & Tender No.)
4. The bidder shall prepare and submit two copies of the bid duly marked as
   (i) Original
   (ii) Copy

DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED
A GOVERNMENT OF INDIA ENTERPRISE

TENDER NOTICE NO. MGS/EN/LC-RUB/2013/02

Name of work :- CONSTRUCTION OF 07 NOS . RUB/LHS IN LIUE OF LC NO. 44 (Km 576/11-13), 48 (Km 585/1-3), 51 (Km 590/23-25),52 (Km 594/17-19),54 (Km 603/17-19), 57 (Km 612/25-27)AND 58 (Km 615/5-7) IN BETWEEN DURGAWATI - KARWANDIYA STATION OF SONNAGAR-MUGHALSARAI SECTION. WITH PRECAST RCC BOX EGMENTS BELOW DFC TRACK

Sl. No.	Description of work	Amount at par with schedule as per Schedule of Quantities	Percentage(%) above/below/at par	Amount
1	Percentage above or below on the items of Annexure - A.	Rs 5,64,13,017.62		
2	Percentage above or below on the items of Annexure - B.	Rs 10,00,000.00		
3	Percentage above or below on the items of Annexure - C	Rs 1,06,94,202.92		

SPECIAL NOTE - ALL THE QUOTED RATES AND AMOUNT SHALL BE LAMINATED

Note :-

i) The approximate quantities of principal items of work to be executed and the amount of the schedule rates have been tabulated in Schedule of Quantities enclosed with this tender document.

ii) The Tenderer should quote a flat percentage at per / above / below for the total amount of the above individual schedule (Schedule wise i.e. Schedule A, Schedule B and Schedule C) separately. **Tenders where more than one flat percentage is quoted against any individual Schedule (i.e. Schedule A, Schedule B and Schedule C) will be summarily rejected.**

iii) The Tenderer should quote the percentage both in figures and words. Where there is a difference between percentages, percentage quoted in words will be taken as correct.

iv) This work is to be executed by Cut and Cover Method with Precast Segmental Box.

END OF PART-II (PRICE BID)

End of Document