

Beginning of Tender Document



Tender document No.CEN/84/ALD/11/12-13

TENDER DOCUMENTS

Tender notice No.	:	CEN/84/ALD/11/12-13	Dated: 31-01-2013
Name of work	:	Construction of Additional New Washing Line 24 length coaches including linking of track and other misc. work in Allahabad Yard.	
Approximate Cost	:	Rs.263.74 Lakh	
Completion period	:	12 (Twelve) months from the date of issue of acceptance Letter/Telegram.	
Earnest Money	:	Rs.2,81,880/-	
Date of closing Tender box	:	15 00 hours on 12-03-2013	
Date of opening	:	Soon after 15 00 hours on 12-03-2013 in the office of	
		Dy. Chief Engineer/Construction/North Central Railway/ Nawab Yusuf Road, Valmiki Chauraha, Allahabad, Dy.Chief Engineer/Construction/ North Central Railway, Jhansi & Chief Project Manager, IRPMU, Shivaji Bridge, New Delhi at 15.30 hours.	

Name and Address of Party to whom the tender sold

Signature of the Tenderer/s

Supdt./WA/Const.

Top Sheet**Tender Notice No.: CEN/84/ALD/11/12-13****Dated: 31-01-2013**

- Name of Work** : **Construction of Additional New Washing Line 24 length coaches including linking of track and other misc. work in Allahabad Yard.**
- Approx. Cost** : **Rs.263.74 Lakh**
- Completion Period** : **12 (Twelve) Month from the date of issue of Acceptance Letter/Telegram.**
- Earnest Money** : **Rs.2,81,880/- (Rs. Two lakh eighty one thousand eight hundred eighty) only pledged in favour of FA & CAO/C/NCR/ALD.**
- Date of opening of Tender** : **Soon after 15 00 hrs on 12-03-2013**
- When was the partnership constituted and deed executed** :
- Whether attested copies of Partnership deed and Power of Attorney furnished with the tender.** :
- The working contractors should submit a list of works executed/now being executed by them with their value and agreement No. with the tender** :

N.B.: 1. The tender/s not accompanied with above credentials along with tender, is liable to be rejected.

Signature of the Tenderer

NORTH CENTRAL RAILWAY
TENDER FORM (FIRST SHEET)

Tender No. **CEN/84/ALD/11/12-13**

Dated: 31-01-2013

Name of work: **Construction of Additional New Washing Line 24 length coaches including linking of track and other misc. work in Allahabad Yard.**

To

The President of India,

Acting through the Chief Engineer/Const./ Dy Chief Engineer/Const./North Central Railway, Allahabad.

I/We _____ have read the various conditions to tender attached hereto and agree to abide by the said Conditions. I/We also agree to keep this tender open for acceptance for a period of 90 days from the date fixed for opening of the same and in default thereof I/We will be liable for forfeiture of My/Our Earnest Money. I/We offer to do the work for North Central Railway at the rates quoted in the attached schedule and hereby bind myself/ourselves to complete the work in all respects within **12 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 and to carry out the work according to the Special Conditions of Contract and Specifications of material and works as laid down by the Railway in the annexed Special Conditions/Specifications and the North Central Railway Works Hand Book corrected up to date, Schedule of Rates corrected up to date for the present contract.
3. A sum of **Rs.2,81,880/- (Rs. Two lakh eighty one thousand eight hundred eighty) only**, pledged in favour of FA & CAO/C/NCR/ALD, is herewith forwarded as Earnest Money. The full value of the Earnest Money shall stand forfeited without prejudice to any other rights of remedies in case my/our Tender is accepted and if:
 - a) I/We do not execute the contract documents within seven days after receipt of the notice issued by the Railway that such documents are ready; and
 - b) I/We do not commence the work within fifteen days after receipt of orders to that effect.

Signature of the Tenderer

5. Until 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 as indicated in the letter of acceptance of my/our offer for this work.

Signatures of witnesses:

.....

(1).....

Signature of the Tenderer (s)

(2).....

Date.....

Address of the Tenderer (s)

Signature of the Tenderer

TENDER FOR (SECOND SHEET)**1.0 INSTRUCTIONS TO TENDERERS AND CONDITIONS OF TENDER**

The following documents form part of Tender/Contract and must be submitted as a complete set failing which tender is liable to be rejected:-

- (a) Tender forms: Top Sheet, First Sheet & Second Sheet
- (b) Special Conditions/Specifications
- (c) Special Conditions Relating to Site Data & Specifications
- (d) Schedule of approximate quantities

2.0 Drawing for the work:

- 2.1 The drawings for the work can be seen in the office of the DY Chief Engineer/Construction/North Central Railway, Allahabad at any time during office hours. The drawings are only for the guidance of tenderer/s. Detailed working drawing, if required, based generally on the drawings mentioned above will be given by the engineer or his representative from time to time.
- 2.2 The detail drawings will be made available at the stages. It should be noted by tenderer/s that these drawings are meant for general guidance only and the Railway may suitably modify them during the execution of the work according to the circumstances without making the Railway liable for any claims on account of such changes.
- 2.3 The tenderer/s is/are advised to visit the site of work and investigate actual conditions regarding nature and conditions of soil, difficulties involved due to inadequate stacking space, due to built up area around the site, availability of materials water and labour probable sites for labour camps, stores, godowns, etc. They should also satisfy themselves as to the sources of supply and adequacy for their respective purpose of different materials referred in the specifications and indicated in the drawings. The extent of lead and lift involved in the execution of works and any difficulties involved in the execution of work should also be examined before formulating the rates for complete items of work described in the schedule.
- 2.4 The Railway Administration reserves the right to modify the plans and drawings as referred to in the special data and specifications as also the estimate and specifications without assigning any reasons as and when considered necessary by the railway. The percentage rates for the schedule items and items rates for the non-schedule items quoted by the contractor as may be accepted by the railways will, however, hold good irrespective of any changes, modifications, alterations, additions, omissions in the locations of structures and detailed drawings, specifications and/or the manner of executing the work.

Signature of the Tenderer

- 2.5 It should be specifically noted that some of the detailed drawings may not have been finalized by the railway and will, therefore, be supplied to the contractor as and when they are finalized on demand. No compensation whatsoever on this account shall be payable by the Railway Administration.
- 2.6 No claim whatsoever will be entertained by the Railway on account of any delay or hold up of the work/s arising out of delay in approval of drawings, changes, modifications, alterations, additions, omission and the site layout plans or details drawings and design and or late supply of such material as are required to be arranged by the Railway or due to any other factor on Railway Accounts.

3.0 Constitution of the Firm

- 3.1 **Partnership deeds, Power of Attorney:** The tenderer shall clearly 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 alongwith the tender and authorization to sign the tender documents on behalf of partnership firm. If these documents are not enclosed alongwith tender documents, the tender will be treated as having been submitted by individual signing the tender documents. The Railway will not be bound by any power of attorney granted by the tenderer or by changes in the composition of the firm mad subsequent to the execution of the contract. It may, however recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor.
- 3.2 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 alongwith the tender or at later stage, a power of attorney duly stamped and authenticated by a Notary Public or by Magistrate in favour of the specific person whether he/they be partner/s of the firm or any other person specifically authorizing him/them to 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.
- 3.3 **Employment/Partnership, etc., of Retired Railway Employees:** Should a tenderer be retired engineer of the Gazetted rank or any other Gazetted officer working before his retirement, whether in the executive or administrative capacity, or whether holding a pensionable post or not, in the any department of any of the railways owned and administered by the President of India for the time being, or should a tenderer being partnership firm have as one of its partners a retired engineer or retired Gazetted Officer as aforesaid, or should a tenderer being an incorporated company have any such retired engineer or retired officer as one of its Directors, or should a tenderer have in his employment any retired Engineer or retired Gazetted Officer as aforesaid, the full information as to the date of retirement of such Engineer or Gazetted Officer from the said service and in case where such Engineer or 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

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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 the Engineer 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. Tenders without the information above referred to or a statement to the effect that no such retired Engineer or retired Gazetted Officer is so associated with the tenderer, as the case may be shall be rejected.

- 3.4 Should a tenderer or contractor being an individual on the list of approved Contractor's have a relative/s or in the case of partnership firm or company of contractors one or more of his shareholder/s or a relative/s of the shareholder/s employed in gazetted capacity in any department of the North Central Railway, the authority inviting tenders shall be informed of the fact at the time of submission of tender, failing which the tender may be disqualified/rejected or if such fact subsequently comes to light, the contract may be rescinded in accordance with the provision in clause 62 of General Conditions of Contract.

4.0 Minimum eligibility criteria: Tenderers fulfilling following minimum credential criteria shall only be considered eligible for award of work:

- 4.1 The tenderer should have completed successfully atleast one work of similar nature for a minimum value of 35% of advertised cost of work in last three financial years and up to date of opening of tender in current year. The similar work is defined as “**Any Civil Engineering Work**”.
- 4.2 The tenderer should have received total contract amount during last three financial years and up to date of opening of tender in the current year as per latest audited books of accounts of a minimum value of 150% of advertised cost of work.

5.0 Other information

- 5.1 Tenderer/s must not have been black listed or de-registered by any government agency or public sector undertaking during last ten years.
- 5.2 The tenderer/s shall submit with his/their tender a list of serviceable machinery, tools and plants, equipment and vehicles he/they has/have in hand for executing the work those he/they intends/intend to purchase.
- 5.3 Payments shall be released to the contractors/vendors through EFT/ECS.
- 5.4 The tenderer for carrying out any construction work in Uttar Pradesh must get themselves registered from the Registering Officer under Section-7 of the Building and other Construction Workers Act, 1996 and rules made thereto by the Uttar Pradesh Government and submit certificate of Registration issued from the Registering Officer of the Uttar Pradesh Government (Labour Department). For enactment of this Act, the tenderer shall be required to pay cess @ 1% of cost of construction work to be

Signature of the Tenderer

deducted from each bill. Cost of material shall be outside the purview of cess, when supplied under a separate schedule item.

5.5 Tenderer shall submit documents in support of minimum eligibility criteria alongwith the tender. No documents in support of minimum eligibility criteria will be accepted/entertained after opening of tender.

5.6 **Tenders from JVs/Consortiums/MOUs are not permitted in this tender.**

6.0 Instructions to Tenderers and Conditions of Tender:

6.1 The tenderer/s shall quote uniform percentage rate i.e. below/par/above of total cost calculated by the Railway in figures as well as in words, for all labour and materials items for a group of chapters of North Central Railway Standard Schedule of Rates–2006 and/or 2010 of SOR items, and uniform percentage rates for Non-Schedule items in the attached Schedule of items, Rates and Quantities. Every possible fluctuation, in the rate of labour, material and general commodities, and other possibilities of each and every kind which may effect the rates, should be considered and kept in view before quoting the rates and no claim on this account shall be entertained by the Railway under any circumstances except the price escalation payable as per price escalation clause, if any.

6.2 The rate/s should be quoted in figures as well as in words. If there is variation between the rates quoted in figures and in words, the rate quoted in 'words' shall be taken as correct. If more than one or improper rates are tendered for the same item, the tender is liable to be rejected.

6.3 Each page of the tender papers is to be signed and dated by the tenderer/s or such person/s on his/their behalf who is/are legally authorized to sign for him/them.

6.4 Tenders containing erasures and alterations of the tender documents are liable to be rejected. Any corrections made by the tenderer/s in his/their entries should be in INK and must be attested by him/them under full signature and date.

6.5 The works are required to be completed within a period of **12 months** from the date of issue of acceptance letter.

6.6 All work will be paid for at the tendered rates on the basis of actual measurements taken at site. No cognizance will be taken for heights and thickness of masonry over those shown in the approved drawings. Individual rate for each non-schedule item should be for complete finished work, inclusive of all operational charges. Nothing extra will be payable on any account.

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7.0 Earnest Money

- 7.1 The tender must be accompanied by a sum of **Rs.2,81,880/- (Rs. Two lakh eighty one thousand eight hundred eighty)** only as earnest money deposited in cash or in any of the forms as mentioned in Regulations for tenders and Contracts for the guidance of the Engineers and Contractors, failing which the tender will not be considered.
- 7.2 The Earnest Money of the requisite amount referred to in Clause 5.1 above is required to be deposited either in cash with the DCPM/NCR/ALD on any working day **before 12.00 hrs on 12-03-2013** or in any of the following form.
- 7.3 Deposit receipts, pay order, demand drafts. These forms of earnest money could be either of the State Bank of India, or any of the Nationalised Banks, pledged in favour of **FA & CAO/Const/ North Central Railway, Allahabad**. No confirmatory advice from the Reserve Bank of India will be necessary.
- 7.4 Deposit receipts executed by the Scheduled Banks (other than State Bank of India and the Nationalized Bank) approved by the Reserve Bank of India for this purpose. The Railways will not, however, accept deposit receipt without getting in writing the concurrence of the Reserve Bank of India.
- 7.5 The original official cash receipts etc., must be attached with the tender, failing which, the tender will be rejected.
- 7.6 Tenders submitted with Earnest Money in Cheque, Government Securities or in any form other than those specified in clause 3.2 above, shall not be considered.
- 7.7 No interest shall be allowed on the earnest money.
- 7.8 **Validity of the offer:** The Tenderer/s shall keep the offer open for a minimum period of 90 days from the date of opening of the tender. It is understood that the tenders documents has been sold/issued to the Tenderer/s and the Tenderer/s, is/are permitted to tender in consideration of the stipulation on his/their part that after submitting his/their tender subject to the period being extended further if required by mutual agreement from time to time, he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to the of North Central Railway. Should the tenderer fail to observe or comply with the foregoing stipulation, the amount deposit as Earnest Money for the due performance of the above stipulation shall be forfeited to the Railway.
- 7.9 If the tender is accepted, the amount of Earnest Money will be retained and adjust as Security Deposit for 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.

Signature of the Tenderer

7.10 The Earnest Money of the unsuccessful tenderer/s will, save as here-in-before provided, be returned to the unsuccessful tenderers/s within a reasonable time but the Railway 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 Earnest Money while in their possession nor be liable to pay interest thereon.

8.0 Right of the Railway to deal with the tender: The authority for the acceptance of the tender will rest with the Railway. It shall not be obligatory on the said authority to accept the lowest tender or any other tender and no tenderer/s shall demand any explanation for the cause of rejection of his/their tender nor the Railway undertake to assign reasons for declining to consider or reject any particular tender or tenders.

8.1 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 Railway reserves the right to reject such tender at any stage.

8.2 If the tenderer/s expires after the submission of his/their tender or after the acceptance of his/their tender, the Railway 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 Railway shall deem such tender as cancelled, unless the firm retains its character.

8.3 Tenderer's Credentials: Tenderers should submit documents in support of minimum eligibility criteria alongwith the tender. No document in support of minimum eligibility criteria will be accepted/entertained after opening of tender.

Tenderer/s who has/have not carried out any work so far on this Railway and who is/are not borne on the approved list of the contractors of North Central Railway 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.

9.0 Submission of Tender:

9.1 Tender must be enclosed in a sealed cover, superscribed "**Tender No.CEN/84/ALD/11/12-13 Dated: 31-01-2013**" and must be deposited in the special box allotted for the purpose in the office of **Dy Chief Engineer (Const.)/NCR Allahabad, Dy Chief Engineer (Const) NCR Jhansi or**

Signature of the Tenderer

Chief Project Manager, IRPMU, Shivaji Bridge, New Delhi up to 15.00 hours on 12-03-2013. This Special box will be sealed at 15.00 hour on 12-03-2013. The tender will be opened at 15.30 hours on the same day. The tender papers will not be sold after 15.00 hours on 11-03-2013. Tenders can also be sent by registered post to the address of **Dy Chief Engineer/Const., North Central Railway, Valmiki Chauraha, Nawab Yusuf Road, Allahabad** so as to reach his office not later than 15.00 hours on 12-03-2013. In case the intended date of opening of tenders is declared holiday, the tender will be opened on the next working day on the same time.

- 9.2 The cost of tender document down loaded from Railway's web site **www.ncr.railnet.gov.in, or www.tenders.gov.in.** should be submitted alongwith the tender in shape of crossed demand draft (non-refundable) drawn on State Bank of India, Allahabad Branch payable to FA & CAO/Const., North Central Railway, Allahabad, otherwise tender will not be considered.
- 9.3 Non-compliance with any of the conditions setforth therein above is liable to result in the tender being rejected.

10.0 Acceptance of Tender

- 10.1 If the tenderer/s deliberately gives a wrong information/whose Credentials/documents in his/their tenders and thereby create(s) circumstances for acceptance of his/their tender, Railway reserves the right to reject such tender at any stage, besides, shall suspend the Business for One Year.
- 10.2 The authority for acceptance of the tenders rests with GM/NCR, Chief Administrative Officer/Construction or Chief Engineer/Construction, as the case may be who does not undertake to assign reasons for declining to consider any particular tender or tenders. He also reserves the right to accept the tender in whole or in part or to divide the tender amongst more than one tenderer if deemed necessary.
- 10.3 The successful tenderer/s shall be required to execute an agreement with the President of India acting through the CAO/Construction, Chief Engineer/Construction / Dy Chief Engineer/Construction, North Central Railway, Allahabad as case may be for carrying out of the work as per agreed conditions. The cost of stamp for the agreement will be borne by the North Central Railway if any.
- 10.4 The contractors operations and proceedings in connection with the works shall at all times be conducted during the continuance of contract in accordance with the laws, ordinance, rules and regulations for the time being in force and the contractor shall further observe and comply with the bye-laws and regulations of the Govt. of India, State Govt. and of Municipal & other authorities having jurisdiction in connection with the works or site over operations such as these are carried out by the contractor/s and shall give all notice required by such bye-laws and regulations. The contractor/s

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and his workmen shall also comply with the Hospital and medical regulations in force for the time being.

- 10.5 The contractor shall be responsible for the observance of the rules and regulations under the mines act and mineral rules and Indian Metallurgical rules and regulations of State/Central Govt. concerned as amended from time to time.
- 10.6 The contractor shall at all times keep the railway administration indemnified against all penalties that may be imposed by the Govt. of India or State Govt. for infringements or any of the clauses of the Mines Act and rules made there under in respect of quarries from which the ballast for these works is procured.
- 10.7 The tenderer/s shall not increase his/their rate in case the Railway Administration negotiates for reduction of rates. Such negotiations shall not amount to cancellation or withdrawal of the original offer and rates originally quoted will be binding on the tenderer/s.
- 10.8 The tenderer/s shall submit an analysis of rates if called upon to do so.
- 10.10 A corrigendum shall be issued in case the increase in quantity on one or more items result an extra expenditure in excess of 10% of the value of the contract or Rs.50,000/- whichever is less. For the purpose of assessing the increase in the quantity and the increase in the value of contract only such of the items in which there is any increase shall be taken into account and the saving in other items ignored.
- 10.11 Non-compliance with any of the condition set-forth herein is liable to result in the tender being rejected.

11.0 Security Deposit on Acceptance of Tender

- 11.1 The earnest money deposited by the contractor with his tender will be retained by the Railways as part of security for the due and faithful fulfillment of the contract by the contractor. The balance to make up the security deposit, the rates for which are given below, may be deposited by the contractor in cash or may be recovered by percentage deduction from the contractor's "on account bills". Provided also that in case of defaulting contractor the Railway may retain any amount due for payment to the contractor on the pending "on account bills" so that the amounts so retained may not exceed 10% of the total value of the contract.
- 11.2 Unless otherwise specified in the special conditions, if any, the Security Deposit/rate of recovery/mode of recovery shall be as under:-
- (a) Security Deposit for each work shall be 5% of the contract value.
 - (b) The rate of recovery shall be at the rate of 10% of the bill amount till the full security deposit is recovered.
 - (c) Security Deposits will be recovered only from the running bills of the contract and no other mode of collecting SD such as SD in the

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form of instruments like BG, FD etc. shall be accepted towards Security Deposit.

11.3 After the work is physically completed, security deposit recovered from the running bills of a contractor can be returned to him if he so desires, in lieu of FDR/irrevocable bank guarantee for equal amount to be submitted by him.

11.4 No interest shall be allowed on Security Deposit.

12.0 Performance Guarantee:

12.1 The successful bidder shall have to submit a Performance Guarantee (PG) 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 up to 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 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 EMD and other dues, if any payable against that contract. The failed contractor shall be debarred from participating in re-tender for that work.

12.2 The successful bidder shall submit the Performance Guarantee (PG) in any of the following forms, amounting to 5% of the contract value:

- (i) A deposit of Cash;
- (ii) Irrevocable Bank Guarantee;
- (iii) Government Securities including State Load Bonds at 5% below the market value;
- (iv) Deposit Receipts, Pay Orders, Demand Drafts and Guarantee Bonds. These forms of Performance Guarantee could be either of the State Bank of India or of any of the Nationalized Bank;
- (v) Guarantee Bond executed or Deposits Receipts tendered by all Scheduled Banks;
- (vi) A Deposit in the Post Office Saving Bank;
- (vii) A Deposit in the National Savings Certificates;
- (viii) Twelve years National Defence Certificates;
- (ix) Ten years Defence Deposits;
- (x) National Defence Bonds and
- (xi) Unit Trust Certificates at 5% below market value or at the face value whichever is less.

12.3 Also, FDR in favour of FA& CAO (free from any encumbrance) may be accepted.

12.4 The instruments as listed above will also be acceptable for Guarantees in case of Mobilization Advance.

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- 12.5 The Performance Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA) has been issued, but before signing of the contract agreement. This P.G. shall be initially valid upto the stipulated ate of completion plus 60 days beyond that. In case, the time for completion of work gets extended, the contractor shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days.
- 12.6 The value of PG to be submitted by the contractor will not change for variation upto 25% (either increase or decrease). In case during the course of execution, value of the contract increases by more than 25% of the original contract value, an additional Performance Guarantee amounting to 5% (five percent) for the excess value over the original contract value shall be deposited by the contractor.
- 12.7 The Performance Guarantee (PG) shall be released after physical completion of the work based on 'Completion Certificate' issued by the competent authority stating that the contractor has completed the work in all respects satisfactorily. The Security Deposit shall, however, be released only after expiry of the maintenance period and after passing the final bill based on 'No Claim Certificate' from the contractor.
- 12.8 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 risk & cost of the failed contractor. The failed contractor shall be debarred from participating in the tender for executing the balance work. If the failed contractor is a JV or a Partnership firm, then every member/partner of such a firm shall be debarred from participating in the tender for the balance work in his/her individual capacity or as a partner of any other JV/partnership firm.
- 12.9 The engineer 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 provisions in the contract agreement) in the event of:
- (i) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Engineer may claim the full amount of the Performance Guarantee.
 - (ii) Failure by the contractor to pay 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.
 - (iii) 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.

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13.0 Variation in Quantities of items of contracts:

- 13.1 Individual NS items in contracts shall be operated with variation of plus or minus 25% and payment would be made as per the agreement rate. For this, no finance concurrence would be required.
- 13.2 In case an increase in quantity of an individual item by more than 25% of the agreement quantity is considered unavoidable, the same shall be got executed by floating a fresh tender. If floating a fresh tender for operating that item is considered not practicable, quantity of that item may be operated in excess of 125% of the agreement quantity subject to the following conditions:
- 13.3 Operation of an item by more than 125% of the agreement quantity needs the approval of an officer of the rank not less than S.A. Grade;
- (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 quoting of the concerned item shall be paid at 96% of the rate awarded for that particular tender;
 - (iii) Variation in quantities of individual items beyond 150% will be prohibited and would be permitted only in exceptional unavoidable circumstances with the concurrence of associate finance and shall be paid at 96% of the rate awarded for that item in that particular tender.
- 13.4 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.
- 13.5 Execution of quantities beyond 150% of the overall agreemental value should not be permitted and, if found necessary, should be only through fresh tenders or by negotiating with existing contract with prior personal concurrence of FA&CAO/FA&CAO/C and approval of General Manager.
- 13.6 In cases where decrease is involved during execution of contract:
- 13.7 The contract signing authority can decrease the items upto 25% of individual item without finance concurrence.
- 13.8 For decrease beyond 25% for individual items or 25% of contract agreement value, the approval of an officer not less than rank of S.A. Grade may be taken, after obtaining 'No Claim Certificate' from the contractor and with finance concurrence, giving detailed reasons for each such decrease in the quantities.
- 13.9 It should be certified that the work proposed to be reduced will not be required in the same work.

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- 13.10 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 item whose original agreement value is less than 1% of the total original agreement value.
- 13.11 No such quantity variation limit shall apply for foundation items.
- 13.12 As far as SOR items are concerned, the limit of 25% would apply to the value of SOR schedule as a whole and not on individual SOR items. However, in case of NS items, the limit of 25% would apply on the individual items irrespective of the manner of quoting the rate (single percentage rate or individual item rate).
- 13.13 For the tenders accepted at Zonal Railways level, variations in the quantities will be approved by the authority in whose powers revised value of the agreement lies.
- 13.14 For tenders accepted by General Manager, variations upto 125% of the original agreement value may be accepted by General Manager.
- 13.15 For tenders accepted by Board Members and Railway Ministers, variations upto 110% of the original agreement value may be accepted by General Manager.
- 13.16 The aspect of vitiation of tender with respect to variation in quantities should be checked and avoided. In case of vitiation of the tender (both for increase as well as decrease of value of contract agreement), sanction of the competent authority as per single tender should be obtained.

14.0 Conditions of Contract and Specifications:

- 14.1 Except where specifically stated otherwise in the tender documents the work is to be carried out in accordance with **(i) North Central Railway General Conditions of Contract Regulations and Instructions for tenderer/s and standard form of Contract 2010 (ii) Indian Railways Unified Standard Schedule of Rates 2010 (iii) Indian Railways Unified Standard Specifications (Works & Material) 2010, Vol-I: Chapter 0 to 10 and Vol-II, Chapter 11 to 26**. Copies of all these publications can be obtained from the office of General Manager/North Central Railway, Allahabad/Chief Engineer/Construction, Allahabad, if available, on payment.
- 14.2 The tender documents referred to in clause 1.0 above will govern the works done under this contract in addition to documents referred to in clause 11.1 above. Where there is any conflict between special tender conditions regarding instructions to tenderer/s, special conditions relating to site data and specifications and the stipulations contained in the **schedule of rates and quantities on the one hand and the Indian Railways Unified Standard Specifications (Works & Material) 2010, Vol-I: Chapter 0 to 10 and Vol-II, Chapter 11 to 26, the General Conditions of Contract,**

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2010 etc., Indian Railways Unified Standard Schedule of Rates 2010 on the other hand, the former shall prevail.

15.0 Period of Completion:

- 15.1 The entire work is required to be completed in all respects within **12 (twelve) Months** from the date of issue of the acceptance letter/telegram. Time is the essence of contract. The contractor/s will be required to maintain speedy and required progress to the satisfaction of the Engineer to ensure that the work will be completed in all respects within the stipulated period failing which action may be taken by the Railway Administration in terms of Clause 17 and/or Clause 62 of the General Conditions of Contract 2010.
- 15.2 The contractor/s shall arrange to execute the different items of works in close consultation with and as per directions of the Engineer. So that other works being executed in the same area/premises either departmentally or through another agency such as providing services like road, water supply arrangement, water pipe line, sewer work, land scaping, electrical and S&T works etc. are also progressed concurrently. It may be noted, however, that any delay in the execution of departmental works, for whatsoever reason shall not be accepted as an excuse for non-performance of the contract.
- 15.3 The contractor/s will be required to give Chief Engineer/Construction (Central) / Dy. Chief Engineer/Const. a monthly progress report of the work done during the month on 4th of the following month. He will also give to the Dy. Chief Engineer/Const. the programme of work to be done in coming month by 25th of the preceding month. The programme will be subject to alteration or modifications at the direction of the Chief Engineer/Const./Dy. Chief Engineer/Const. who may discuss such modifications or alterations with the contractor as considered necessary. Approval of any programme shall not in any way relieve the contractor from any of his obligations to complete the whole of the work by the prescribed time or extended time, if any.

16.0 Rates for Payment:

- 16.1 The rates given in the attached schedule of rates tendered by the contractor and as accepted by the Railway will form the basis of payment for such items under this contract.
- 16.2 No material price variation or wages escalation on any account whatsoever the compensation for 'Force Majeure' etc. shall be payable under this contract except price escalation clause payable as per price escalation clause, as provided separately in the tender documents.
- 15.3 The rates for any item of work not included in the (Schedule of Items, Rates and Quantities) and which the contractor may be called upon to do by Railway Administration shall be fixed by the supplementary written agreement between the contractor and the Railway before the particular item or items of work is/are executed. In the event of such agreement not being entered into and executed the Railway may execute these works by making

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alternative arrangements. Railways will not be responsible for any loss or damages on this account.

- 16.4 The contractor shall work in close co-operation with the contractor/departmental staff working in the adjacent sections.
- 16.5 It should be specifically noted by the tenderers that no separate loading, unloading and leading charges for materials (which are supplied by the Railway) shall be paid for by the Railways and the rates quoted by the tenderer/s shall be inclusive of all these charges.
- 16.6 The item Nos., description, units and rates given in schedule of rates are as per **Indian Railways Unified Standard Schedule of Rates-2010** and any discrepancy during the execution of the work in the working rates, quantity and units etc. should be rectified by reference to the printed schedule of rates which shall be treated as authority and will be binding on the contractor.
- 16.7 Should there arise any items which may be necessary for the completion of work but which does not appear in the Schedule of Items, Rates and Quantities attached with tenders, its rate will be fixed by analysis of actual inputs of all types including labour and material or derived from the labour and material rates given in the **Indian Railways Unified Standard Schedule of Rates-2010**. **The rates for such non-scheduled items occurring during the course of construction shall be payable subject to the approval of the competent authority.** No items or work requiring non-schedule rates will be carried out unless ordered to do so by the Engineer and made a part of the contract. The rates derived from the **Indian Railways Unified Standard Schedule of Rates-2010** will be subject to percentage above or below tendered by the contractor.
- 16.8 Payment for the work done will be made to the contractor only when the formal agreement has been executed between the parties.

17.0 Price Variation:

- 17.1 Price Variation clause shall be applicable only for tenders of value as prescribed by the Ministry of Railways through instructions/circulars issued from time to time and irrespective of the contract completion period. Materials supplied free of cost by Railway to the contractors shall fall outside the purview of Price variation Clause. If, in any case, accepted offer includes some specific payment to be made to consultants or some materials supplied by Railway free or at fixed rate, such payments shall be excluded from the gross value of the work for the purpose of payment/recovery of price variation.
- 17.2 The Base Month for 'Price Variation Clause' shall be taken as month of opening of tender including extensions, if any unless otherwise stated elsewhere. The quarter for applicability of PVC shall commence from the month following the month of opening of tender. The Price Variation shall be based on the average Price Index of the quarter under consideration.

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- 17.3 Rates accepted by Railway Administration shall hold good till completion of work and no additional individual claim shall be admissible on account of fluctuations 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 hereunder.
- 17.4 Adjustment for variation in prices of amterial, labour, fuel, explosives, detonators, steel, concreting, ferrous, non-ferrous, insulators, zinc and cement shall be determined in the manner prescribed.
- 17.5 Components of various items in a contract on which variaiton in prices be admissible, shall be Material, Labour, Fuel, Explosives, Detonators, Steel, Cement, Concreting, Ferrous, Non-ferrous, Insulator, Zinc, Erection etc. However, for fixed components, no price variation shall be admissible.
- 17.6 The percentage of labour componet, mateiral component, fuel component etc. in various types of Engineering Works shall be as under:

Component	Percentage	Component	Percentage
(A) Earthwork Contracts:			
Labour Component	50%	Other Material Components	15%
Fuel Component	20%	Fixied Component*	15%
(B) Ballast and Quarry Products Contracts:			
Labour Component	55%	Other Material Components	15%
Fuel Component	15%	Fixied Component*	15%
(C) Tunnelling Contracts:			
Labour Component	45%	Detonators Components	5%
Fuel Component	15%	Other Material Components	5%
Explosive Component	15%	Fixed Componet*	15%
(D) Other Works Contracts:			
Labour Component	30%	Fuel Components	15%
Material Component	40%	Fixied Component*	15%

* It shall not be considered for any price variation.

- 17.7 The Amount of variation in prices in several components (labour material etc.) shall be worked out by the following formulae:

$$\begin{aligned}
 \text{(i)} \quad L &= \frac{R \times (I - I_o)}{I_o} \times \frac{P}{100} \\
 \text{(ii)} \quad M &= \frac{R \times (W - W_o)}{W_o} \times \frac{Q}{100} \\
 \text{(iii)} \quad U &= \frac{R \times (F - F_o)}{F_o} \times \frac{Z}{100} \\
 \text{(vi)} \quad X &= \frac{R \times (E - E_o)}{E_o} \times \frac{S}{100} \\
 \text{(v)} \quad N &= \frac{R \times (D - D_o)}{D_o} \times \frac{T}{100} \\
 \text{(vi)} \quad M_s &= O \times (B_s - B_{s_o}) \\
 \text{(vii)} \quad M_c &= A \times (W_c - W_{c_o}) / W_{c_o}
 \end{aligned}$$

For Railway Electrification Works:

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- (viii) $M_{cc} = [(C-C_0)/C_0 \times 0.4136] \times G$
 (ix) $M_f = [(S_f-S_{fo})/S_{fo} + (Z-Z_0)/Z_0 \times 0.06] \times H$
 (x) $M_{nf} = [C_u-C_{uo})/C_{uo}] \times J$
 (xi) $M_z = [(Z-Z_0)/Z_0] \times W$
 (xii) $M_{IN} = [(In-In_0)/In] \times 85$

Where,

- L Amount of Price variation in **Labour**
 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**
 Ms Amount of price variation in **Steel**
 Mc Amount of price variation in **Cement**
 Mcc Amount of price variation in **Concreting**
 Mf Amount of price variation in **Ferrous**
 Mnf Amount of price variation in **Non-Ferrous**
 Mz Amount of price variation in **Zinc**
 M_{IN} Amount of price variation in **Insulator**
- O Weight of steel in tonnes supplied by the contractor as per the 'on-account' bill for the month under consideration.
- R Gross value of work done by contractor as per on-account bill(s) excluding cost of materials supplied by Railway at fixed price. This will also exclude specific payment, if any, to be made to the consultants engaged by contractors (such payment will be indicated in the contractor's offer).
- A Value of cement supplied by contractor as per on account bill in the quarter under consideration.
- Io Consumer Price Index Number for Industrial Workers - All India - published in R.B.I. Bulletin for the base period.
- I Consumer Price Index Number for Industrial Workers - All India - Published in R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration.
- Wo Index Number of Wholesale Prices – By Groups and Sub-Groups - All commodities - as published in the R.B.I. Bulletin for the base period.
- W Index Number of Wholesale Prices – By Groups and Sub- Groups – All commodities – as published in the R.B.I. Bulletin for the average price index of 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.

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- F 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 average price index of the 3 months of the quarter under consideration.
- Eo Cost of explosives as fixed by DGS&D in the relevant rate contract of the firm from whom purchases of explosives are made by the contractor for the base period.
- E Cost of explosives as fixed by DGS&D in the relevant rate contract of the firm from whom purchases of explosives are made by the contractor for the average price index of 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 purchases of detonators are made by the contractor for the base period.
- D Cost of detonators as fixed by DGS&D in the relevant rate contract of the firm from whom purchases of detonators are made by the contractor for the average price index of the 3 months of the quarter under consideration.
- Bs SAIL's (Steel Authority of India Limited) ex-works price plus Excise Duty thereof (in rupees per tonne) 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 Rs. Per tonne) 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.
- Wco Index No. of Wholesale Price of sub-group (of Cement) as published in RBI Bulletin for the base period.
- Wc Index No. of Wholesale Price of sub-group (of Cement) as published in RBI Bulletin for the average price index of the 3 months of the quarter under consideration.
- C RBI Wholesale price index for cement for the month which is six months prior to date of opening of tender.
- Co RBI wholesale price index for the months which is one month prior to date of opening of tender.
- Z IEEMA price for Zinc for the month which is two months prior to date of inspection of material.

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- Zo IEEMA price for Zinc for the month which is one month prior to date of opening of tender.
- Cu IEEMA price for Copper wire bar for the month which is two months prior to date of inspection of material.
- Cuo IEEMA price for copper wire bar for the month which is one month prior to date of opening of tender.
- Sf IEEMA price index for Iron & Steel for the month which is two months prior to date of inspection on material.
- Sfo IEEMA price index for Iron & Steel for the month which is one month prior to date of opening of tender.
- In RBI wholesale price index for Structural Clay Products for the month which is two months prior to date of inspection of material.
- Ino RBI wholesale price index for Structural Clay Products for the months which is one month prior to date of opening of tender.
- P % of Labour Component
- Q % of Material Component
- Z % of Fuel Component
- S % of Explosive Component
- T % of Detonators Component
- G % of Concreting Component
- H % of Ferrous Component
- J % of Non-Ferrous Component
- W % of Zinc Component

17.8 The demands for escalation of cost shall be allowed on the basis of provisional indices made available by Reserve Bank of India. Any adjustment needed to be done based on the finally published indices shall be made as and when they become available.

17.9 Relevant categories of steel for the purpose of operating Price Variation Formula, as mentioned in this Clause, based on SAIL's ex-works price plus Excise Duty thereof, shall be as under:

SL	Category of Steel Supplied in Railway work	Category of steel produced by SAIL whose Ex-works Price Plus Excise Duty would be adopted to determine Price Variation.
1	Reinforcement bars and other rounds	TMT 8 mm IS1786 Fe 415/Fe 500
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	Channels 200 x 75 mm IS 2062

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	and joists	E250 A 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 1, 2 & 3 above.

17.10 Price Variation During Extended Period of contract

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

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

18.0 Income Tax:

- 18.1 Under Section 194-C of the Income Tax Act 1961 deduction of 2% will be made for sums paid for carrying out the work under this contract. In case of supply contract for ballast, deduction of 2% (Two Percent) Income tax will be made for the sums paid for labour portion only (i.e., loading, unloading, stacking, measurement and laying etc.).

19.0 Supplementary Agreement:

- 19.1 After the work is completed and taken over by the Railway as per terms and conditions of the contract agreement or otherwise concluded by the parties with mutual consent and full and final payment is made by the Railway to the contractor for work done under the contract the parties shall execute the supplementary agreement annexed here to as Annexure-B.
- 19.2 Measures to be taken in construction and repairs on roads, embankments, etc.
- 19.3 All borrow pits dug for and in connection with the construction and repairs of buildings, roads, embankments, etc. shall be dug and connected with each other in the formation of a drain directed towards the lowest level and

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properly sloped for discharge into a river, stream, channel or drain and no person shall create any isolated borrow pit which is likely to cause accumulation of water which may breed mosquitoes.

- 19.4 Non fulfilment of the provision in 9.9.1 above shall be a breach of the contract and contractor/s shall be liable to pay by way of agreed liquidated damages to the Railway at the rates of Rs.100/- for each breach and in addition to that contractor further undertake to pay the amount incurred by the Railway in getting the said job/s done at the risk and cost of the contractor. Besides this, the contractor will also be held responsible for any laws for contravening them.

20.0 Setting out works:

- 20.1 The contractor is to set out the whole of the work in consultation with the engineer or an official to be deputed by the Engineer and during the progress of works to amend on the requisition of the Engineer any errors, which may arise there in and provide efficient and sufficient staff and labour thereon. The contractor shall also alter or amend any errors in the dimension lines on levels to the satisfaction of the Engineer or his authorized representative without claiming any compensation for the same.
- 20.2 The contractor shall provide, fix and be responsible for maintenance of all stocks, templates, profiles, land marks, points, burjies, monuments, centre line pillars, reference pillars, etc. and shall take all necessary precautions to prevent their being removed altered or disturbed and will be responsible for the consequence of such removal, alterations or disturbance and for their efficient reinstatement.
- 20.3 The contractor shall protect and support, as may be required or as directed by the Engineer, building, fences, walls, towers, drains, road paths, waterways, foreshores banks, bridges, Railway ground and overhead electric lighting, the telegraphs/ telephones and crossing water service main pipes and cables and wires and altogether matters and things of whatever kind not otherwise herein specified other than those specified or directed to be removed or altered which may be interfered with or which likely to be affected disturbed or endanger by the execution completion of maintenance of the works and shall support provided under this clause to such cases as directed by the Engineer. No payment shall be made by the Railway to the contractor for these works on account of delay for re-arrangement of road traffic or in the contractor having to carry out the short lengths and in such places as per conditions and circumstances may warrant. These will not form the basis of any claim and or dispute for compensation of any kind.

21.0 Supply of materials by the Railways:

- 21.1 If at any time, material which the contractor/s should normally have to arrange himself/themselves, are supplied by the Railway either at the contractor's request or in order to prevent any avoidable delay in the execution of work due to the contractor's inability to make adequate timely

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arrangements for supply thereof or for any other reason, recovery will be made from the contractor's bill either at the market rate prevailing at the time of supply or at the book rate which ever is greater, plus fixed departmental charges viz. freight at 5% (8.33% for items of Iron and G.I. pipe steel) incidental charges at 2% and added on total cost supervision charges at 12¹/₂%. No carriage or incidental charges will be borne by the Railway. The contractor cannot, however, claim as a matter of right the issue of such material by the Railway which he/they is required to arrange himself/themselves in accordance with the terms and conditions of this contract.

- 21.2 In the case, cement and/or steel is issued to the contractor/s free of cost or on cost to be recovered for use on the work, the supply thereof shall be made in stages limited to the quantity/quantities computed by the Railway according to the prescribed specifications and approved drawings as per the agreement. The contractor shall return the cement and/or steel issued in excess of the requirements as above in perfectly good conditions to the Railway immediately after completion or determination of the contract. If the contractor/s fail/s to return the said stores, then the cost of cement and/or steel issued in excess of the requirement computed by the Railway according to the specifications and approved drawing will be recovered from the contractor/s @ twice the prevailing procurement cost at the time of last issue viz. (Purchase price + 5% freight only). This will be without prejudice to the right of the Railway to take action against the contractor/s under the conditions of the contract for not doing/completing the work according to the prescribed specifications and approved drawings. If it is discovered that the quantity of cement and or steel used is less than the quantity ascertained as herein before provided the cost of the cement and/or steel not so used shall be recovered from the contractor/s on the basis of the above-stipulated formula.
- 21.3 The contractor shall be responsible for the safe transport custody and storage of all Railway materials issued to him and he will be liable to make good the loss due to any cause whatsoever, which may be suffered by the Railway on this account. Special precautions should be taken in respect of cement while transporting cement, steps should be taken to safeguard against cement becoming damp or wet due to moisture or rain. The contractor will also be responsible for storing cement in damp proof conditions at site of work at his own cost in accordance with the standard specifications. The Engineer shall decide whether the cement stored in the godown is fit for the work and his decision shall be final and binding on the contractor/s.
- 21.4 The contractor should supply a schedule showing the requirements of explosives/materials required to be supplied to him by the Railway based on detailed plans. The Railway according to this schedule will arrange the materials unless otherwise modified by the Railway due to additions or alterations in the approved plans. No claim whatsoever will be entertained by the Railway on account of late supply of such materials as are required to be arranged by the Railway.

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22.0 Supply of materials by the contractor/s:

- 22.1 Materials used in the work by the contractor shall conform to the North Central Railway Standard Specifications and the relevant I.S.I./I.R.S Specifications, and should be approved by the Engineer before utilizing them on works.
- 22.2 It should be clearly understood that the tendered rates include wastage and wash away due to rains, storms, floods or any other cause whatsoever.
- 22.3 No loading, unloading, lead, lift, stacking, octroi, sales tax, toll tax, royalty or any other charges will be paid for the materials, tools and plants and tools arranged and brought by the contractor to the site of work.

23.0 Service roads:

- 23.1 The contractor/s shall make his/their arrangements for service roads, paths etc. for carrying his/their tools and plants, labour and materials, etc. and will also allow the Railway use of such paths and service roads, etc. for plying its own vehicles free of cost. The tenderer/s will be deemed to have included the cost of making any service roads, roads or paths, etc., that may be required by him/them for plying his/their vehicles for the carriage of his/their men and materials, tools, plants and machinery for successful completion of the work. Similarly, any other feeder road connecting any of the existing roads will be made by the contractor at his/their own cost including any compensation that may be required to be paid for the temporary occupation and or usage of Govt. and or private land and without in any way involving the Railway in any dispute for damage and/or compensation.
- 23.2 In case the Railway has its own paths, service roads, the contractor/s will be allowed to use of such paths or service roads free of cost. He/They shall, however, in no way involve the Railway in any claims or dispute of whatever kind due to the inaccessibility of such paths or service roads or due to their poor condition and or maintenance or their being to be blocked and/or closed.
- 23.3 The rates quoted by the contractor as per Schedule of Items, Rates and Quantities shall form the basis of 'on account payment' for the various items under this contract.
- 23.4 In the course of execution of various items of work under Schedule of Items, Rates and Quantities running bills payment for partly completed works will be made to the contractor. The quantum of such work for payment shall be decided by the Engineer-in-charge whose decision shall be final and binding on the contractor.
- 23.5 No on account payment by the Railway shall protect the contractor/s against or prevent the Railway from recovering from the contractor/s any over payment made to him/them.

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- 23.6 Final payment of the balance amount due will be made after the completion of the entire work and on the certification of the Engineer that work has been completed in all respects and found satisfactory. The security deposit will be refunded Six Months after the date of completion.

24.0 Emergency work:

- 24.1 In the event of any accident or failure occurring in or about the work of arising out for or in connection with the construction completion or maintenance of the work which in the opinion of the Engineer require immediate attention, the Railway may be with its own workmen or other agency execute or partly execute the necessary work or carry out repairs if the Engineer considers that the contractor is not in a position to do so in time and charge the cost thereof, as to be determined by the Chief Engineer/Const. to the contractor.

- 24.2 In terms of the clause 32 of GCC of 2010 the material & plants brought by the contractor on the site or land occupied by the contractor in connection with the work and intended to be used for execution thereof shall immediately, they are brought upon the sites of this said land be deemed to be the property of the Railway. Vehicles, equipments, plant and machinery of the contractor can be drafted by the Railway Administration at their discretion in case of accidents, natural calamities involving human lives, breaches, stoppage of train operation or any contingencies which requires such requisitioning as essential. The decision in this regard of the Engineer In-charge of his superiors i.e. Sr. Engineer/Executive Engineer/DY Chief Engineer etc. shall be final and beyond the ambit of arbitration clauses i.e. exception to arbitration clauses.

- 24.3 Tenderer is required to submit the list of equipment, machinery, construction tools and plants available/deployed at site. The successful Tenderer on receipt of acceptance letter and conveying their consent, shall submit name, addresses, telephone nos., fax nos./E-mail address of the persons to be contacted for requisitioning the above items as detailed in fore-going clauses and notify from time to time any change in the list of equipment/machinery or the address/individuals to the Engineer In-charge in writing. The name and address, telephone nos. and the contractor officials' name shall also be displayed at the site of work.

- 24.4 The manpower, consumable items and maintenance of the above tools & plants when requisitioned shall be the responsibility of the tenderer/contractor so that the equipments, machinery, tools & plants shall be available for effective utilisation at the accident sites, natural calamities, breaches sites etc.

The hire charge per annum shall be calculated at the following rates on the purchase cost of the plant as under: -

Depreciation charges at the following rates:

Light plant 16% per annum.

Heavy plant 10% per annum.

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Special plant 6% per annum.

An additional 10% on the total of (I) above to meet contingencies.

10% contractor profit on total cost as detailed (i) to (ii)

- 24.5 The hire charges per day shall be arrived at dividing the annual hire charges of total of (i) to (iii) above by 365, which shall be the assumed number of working days in year for this purpose. These hire charges will be payable from the day the plant is handed over to the Railway to date on which it is returned to the contractor by Railway.
- 24.6 The contractor manpower charges shall be payable @ minimum wages as notified by the State Govt./Local bodies/Labour Deptt. as the case may be for highly skilled, semi-skilled personnel drafted for operating the plant & machinery.
- 24.7 The payments for the fuel cost shall be paid on the basis of the actual expenditure incurred by the contractor for purchases + 10% contractor's profit thereof which will be the payments towards his miscellaneous expenses too.

25.0 Night work:

If the Engineer is satisfied that the work is not likely to be completed in time except by resorting to night work, he may order without confirming any right on the contractor for claiming any extra payment for the same.

26.0 Disposal of surplus excavated materials:

- 26.1 The contractor shall at all time keep the site free from all surplus earth, surplus materials, and all rubbish which shall arise from the works and should dispose of the surplus excavated materials as ordered by the Engineer failing which it will be done at the cost of the contractor and cost will be deducted from his dues.
- 26.2 The contractor shall within 15 days of completion of entire works remove all unused and surplus materials tools and plants staging and refuge or other materials produced by his operations and shall leave the site in clear and tidy conditions.

27.0 Site Inspection Register:

- 27.1 A site inspection register will be maintained by the Engineer or his representative in which the contractor will be bound to sign day to day entries made by the Engineer or his representative. The contractor is required to take note of the instructions given to him through the site inspection register and should comply with the same within a reasonable time. The contractor will also arrange to receive the entire letters etc. issued to him at the site of works.
- 27.2 The contractor shall, from time to time (before the surface of any portion or the site is interfered with or the work thereon begun) take such levels as the

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Engineer may direct in his presence or any person authorized by him in writing. Such levels approved and checked by him or such authorized persons shall be recorded in writing and signed by the contractor and shall form the basis of the measurements. Immediately before any portion of the work, below water level is started the existing water levels are to be taken and recorded in a similar manner.

- 27.3 The contractor shall have to make and maintain at his own cost suitable approach road and path, etc. for proper inspection of the various works. He shall also provide all facilities as required by the Engineer such as Ladder and other appliances for satisfactory inspection of the works and places where materials for the work are stored or prepared.

28.0 Opening up of work or materials for inspection or test:

Should the Engineer, or any representative consider it necessary for the purpose of enabling inspection of tests analysis to be made to verify or ascertain the quality of any part of the works or of any materials, the contractor shall as and when required by the Engineer or his representatives open up the work or materials for inspection or test or analysis, pull down or cut into any part of the work to make such openings, into under or through any part of the works as may be directed and shall/provide all things facilities which in the opinion of the Engineer or his representative are necessary and essential for the purpose of inspection or test or analysis of the works or of any part thereof or the materials, or of workmanship and the contractor shall close up, cover, rebuild and made good the whole at his own cost, as and when directed by and to the satisfaction of Engineer provided always that of the work in the opinion of the Engineer is found to his satisfaction and in accordance with the contract. The excess expenditure in such examination, inspection or test shall, upon the certificate of the engineer, be borne by the Railways.

29.0 Provision of light signals etc:

- 29.1 The contractor/s shall make such provision for lighting the works, materials and plant and provide all such marks and lights, signals and other appliances as may be necessary or as may be required by the Engineer or other responsible authorities during the execution completion and maintenance of the work and shall provide all labour, stores, etc. required for their efficient working and use at any time of day or night. He/They shall also provide all arrangement of every description of watching and maintenance required in connection with the foregoing and all other services for protection of any securing all dangerous places whether to the contractor's workmen or to other persons and or vehicular traffic until the work is certified by the engineer to have been completed and taken over in accordance with the contract.
- 29.2 The contractor/s will provide upon the works to the satisfaction of the Engineer and at such, places as he may nominate, proper and sufficient life saving, fire fighting and first aid appliances which shall at all times be available for use.

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30.0 Penalties due to unsafe work:

- 30.1 In the event of accident at the work site, a departmental enquiry shall be held and in case it is established that the accident has occurred on account of contractor's negligence or the negligence of his men, penalties up to an upper limit of 10% of the total cost of the work shall be imposed on the contractor.
- 30.2 Railway administration reserves the right to terminate the contract with immediate effect if the contractor is found responsible for causing an accident without giving any further notice/notices to the contractor. In the event of contractor not completing the work or leaving it unsafe at the end of days work so they may serve speed restrictions if required to be imposed, track shall be attended to by the railway immediately at the contractor's cost without any further notice.

31.0 Labour Camps:

- 31.1 Land for setting up a workshop by the contractor or for his labour camp or for any other purpose, shall have to be arranged by the contractor at his own cost and under his own arrangements. The contractor, however, will be permitted to make use of the railway land to the extent that can be made available to him free of cost, by the railway in the vicinity of the site of works. The contractor/s shall at all times be responsible for any damage or trespass committed by his agent and workmen for carrying out the work.
- 31.2 The Railway Administration may recommend to the concerned authorities the issue of necessary transport permits for the work. The contractor shall, however, furnish full justification for the above facilities, to enable the Railway Administration to address the State Government or other authorities in this connection. The contractor shall also maintain regular logbook of receipts and issue of the materials to work, if so required by the Civil Authorities. No claim would, however, be entertained by the non-issue of any priority permits or owing to any interruption in supply.
- 31.3 No claim for idle labour and or idle machinery etc. on any account will be entertained. Similarly no claim shall be entertained for business loss or any such loss.
- 31.4 Attention is invited to Clause 17(B) of the G.C.C. and Clause 14 of tender conditions according to which time is the essence of the contract.
- 31.5 The contractor will have to maintain the work for a period of **06 (Six) Months** as per Clause 47 of the General Conditions of Contract from the date of issue of completion certificates by the engineer except for supply of materials for which there will be no maintenance period.

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32.0 Trade tax/turn over tax/local tax, etc:

- 32.1 Sales tax including turn over tax on works contract, octroi, royalty, toll tax, local tax, duties/Levies as well as services and any other tax levied by central govt. state govt. or local bodies, as applicable on the date of quoting the rates and any change there-in at a later date, shall be considered to be included in the rates quoted by Tenderer/s in the Tender Schedule.
- 32.2 Railways shall deduct the sales tax/Turn Over Tax or any other tax from the Contractor's bill at the rate as applicable as per rules framed by concerned Govt./Local bodies from time to time and remit it to concerned department and shall issue a certificate regarding Tax/Duties/Levies so deducted on demand by the contractor.
- 32.3 The successful tenderer on award of contract will have to furnish contractor's Bank Account number and name of the Bank against which all payments in respect of the contract during the currency of contract shall be made.

**Dy. Chief Engineer/Const.
North Central Railway,
Allahabad.**

For and on behalf of the President of India

Signature of the Tenderer

SPECIAL CONDITIONS RELATING TO SITE DATA AND SPECIFICATIONS

Name of work: **Construction of Additional New Washing Line 24 length coaches including linking of track and other misc. work in Allahabad Yard.**

1.0 SCOPE OF WORK

1.1 The tender covers the work of Construction of new Washing Line adjacent of existing new Prayag Raj (super fast) washing line of East end of Allahabad yard including construction of carriage wagon office electrical switch room, dismantling of existing shed/structure, Linking of track over bed block with holding down bolt cleat bear plate etc. linking of tracks, SEJ & T/out deep screening, spreading of ballast including dismantling of existing track, turnouts, dismantling and removal of SEJ and leading of P.Way materials and other connected works in connection with "D&P of turnouts and track, deep screening, supplying and spreading of ballast through packing, supplying of P.Way fittings etc. in Allahabad Yard.

2.0 Location of work

2.1 The work is to be executed adjacent to new Prayag Raj (super fast) washing line East end of Allahabad yard.

3.0 Applicable Codes, Standards & Publications for Structural & Architectural Work:

3.1 The work shall be executed as per (i) **North Central Railway General Conditions of Contract Regulations and Instructions for tenderer/s and standard form of Contract 2010** (ii) **Indian Railways Unified Standard Schedule of Rates 2010** (iii) **Indian Railways Unified Standard Specifications (Works & Material) 2010, Vol-I: Chapter 0 to 10 and Vol-II, Chapter 11 to 26** with correction slips issued up to date and relevant IRS/IRC/IS codes and circulars.

3.2 The design and construction will be done in terms of IRS, IRC and IS Specifications.

- (a) The specifications mentioned herein in bid documents shall be prime governing.
- (b) Where there is conflict between IRS & IS Specifications, IRS Specifications shall prevail.
- (c) Where there is no provision of specification in IRS, the IRC conditions shall be referred to and followed.
- (d) For items not covered in IRS/IRC Specifications, BS-54000 part 1 to 10 may be followed.
- (e) The decision of Chief Engineer of the Project shall be final and binding in the interpretation of the clause of the codes of practice and specifications under the Special Conditions regarding site Data and

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Specifications of this tender and no claim whatsoever shall be entertained on this account by Railways.

Any difference of opinion between site engineer and contractor shall be referred to Engineer-in-charge of work. The appeal against Engineer-in-charge shall be with Chief Engineer/North Central Railway whose decision shall be final. Items under this scope shall be deemed to be Excepted Matters.

Apart from the basic data, specifications etc. all items of works shall be governed by various codes of specifications as revised/correct/amended up to the time of submission of the tenders/negotiated cost for acceptance.

The more important Codes, Standards and Publications to Contract are listed hereunder:

A	General
IS:875 (Part 3)	Code of practice for design loads (other than earthquake) for buildings and structures
IS:1322	Bitumen felts for water proofing and damp-proofing
IS:1893	Criteria for earthquake resistant design of structures
IS:2572	Code of Practice for construction of hollow concrete block masonry
IS:3414	Code of practice for design and installation of joints in buildings
IS:6408 (Parts 1,2)	Recommendations for modular co-ordination in building industry – tolerances
IS:10958	General check list of functions of joints in building
IS:11817	Classification of joints in buildings for accommodation of dimensional deviations during construction
IS:11818	Method of test for laboratory determination of air permeability of joints in buildings
IS:12440	Pre-cast concrete stone masonry blocks
CPWD	Specifications 96.
BS:476 (Part 7)	Method for classification of the surface spread of flame of products
BS:476 (Part 20)	Method of determination of the fire resistance of elements of construction (general principles)
BS:476 (Part 22)	Methods for determination of the fire resistance of non-load bearing elements of construction
BS:5215	Specification for one-part gun grade polysulphide-based sealants
BS:5606	Guide to accuracy in building
BS:6093	Code of practice for the design of joints and jointing in building construction
BS:8200	Code of practice for the design of non-load bearing external vertical enclosure of building
ASTM C 332	Specification for light weight aggregate for insulating concrete

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SP 7	National Building Code of India
SP 23 (S&T)	Hand Book on Concrete Mixes
B	Bitumen
IS:702	Industrial Bitumen
IS:3384	Specification for bitumen primer for use in waterproofing and damp-proofing
C	Building Construction Practices
IS:1838 Parts I and II.	Specifications for preformed fillers for expansion joint in concrete pavements and structures.
IS:1946	Code of Practice for use of fixing devices in walls, ceilings, and floors of solid construction.
IS:6509	Code of Practice for installation of joints in concrete pavements.
IS:11134	Code of Practice for setting out of buildings.
IS:11433	Parts I and II. Specifications for one part Gun grade polysulphide based joint sealant.
IS:12200	Code of Practice for provision of waterstops at transverse contraction joints in masonry and concrete dams
D	Cement
IS:269	33 grade ordinary Portland cement
IS:455	Portland Slag Cement
IS:650	Specification for standard sand for testing cement.
IS:1489 (Part 1)	Portland pozzolana cement: Fly-ash based
IS:1489 (Part 2)	Portland pozzolana cement: Calcined clay based
IS:3535	Method of Sampling Hydraulic Cements
IS:4031	(Parts 1 to 13) Methods of physical tests for hydraulic cement.
IS:4032	Method of chemical analysis of hydraulic cement.
IS:6925	Methods of test for determination of water soluble chlorides in concrete admixtures.
IS:8042	White Portland Cement
IS:8112	Specification for 43 grade ordinary Portland cement.
IS:12269	Specification for 53 grade ordinary Portland cement.
IS:12330	Specification for sulphate resistant Portland cement.
E	Concrete
IS:456	Code of practice for plain and reinforced concrete.
IS:457	Code of practice for general construction of plain and reinforced concrete for dams and other massive structures.
IS:460 (Parts I to III)	Specification for Test Sieves
IS:516	Methods of test for strength of concrete.
IS:1199	Methods of sampling & analysis of concrete.
IS:1200	Method of measurement of building and civil engineering

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IS:1343	Code of practice for pre-stressed concrete
IS:1607	Method of Test Sieving
IS:2386	Parts I-VIII. Methods of tests for aggregates for concrete.
IS:2430	Methods of Sampling of Aggregates of Concrete
IS:2438	Specification for roller pan mixer
IS:2514	Specification for concrete vibrating tables
IS:2571	Code of practice for laying in-situ cement concrete flooring
IS:2645	Specifications for integral cement water proofing compounds
IS:2722	Specifications for portable swing batchers for concrete (double bucket type)
IS:2770	Methods of testing bond in reinforced concrete part I pull out test
IS:3025	Methods of sampling and test (physical and chemical) for water & waste water
IS:3370	Code of practice for concrete structures for storage of liquids
IS:3935.	Code of practice for composite construction
IS:4326	Code of practice for earthquake resistant construction of building
IS:6925.	Methods of test for determination of water soluble chlorides in concrete Admixtures
IS:7242	Specifications for concrete spreaders
IS:7251	Specifications for concrete finishers
IS:7861	Parts I & II. Code of practice for extreme weather concreting.
IS:7969	Safety code for handling and storage of building materials
IS:8989	Safety code for erection of concrete framed structures
IS:8142	Methods of test for determining setting time of concrete by penetration resistance
IS:9103	Specifications for admixtures for concrete
IS:9013	Method of making, curing and determining compressive strengths of accelerated cured concrete test specimens
IS:9284	Method of test for abrasion resistance of concrete
IS:10262	Recommended guidelines for concrete mix design.
MOSTIRC	Specifications for Road and Bridge Works, Ministry of Surface Transport (Roads Wing)
IRS	Concrete Bridge Code
IRC 21-1987	Standard Specifications and Code of Practice for Road Bridges Section III – Cement Concrete (Plain & Reinforced)(First Revision)
ASTM - C - 94	Ready Mix Concrete
F	Construction Plant and Machinery.
IS:1791	Specification for batch type concrete mixers.

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IS:2505	General requirements for concrete vibrators: Immersion type.
IS:2506	General requirements for screed board concrete vibrators.
IS:3366	Specification for pan vibrators.
IS:3558	Code of Practice for use of immersion vibrators for consolidating concrete.
IS:4656	Specifications for form vibrators for concrete.
IS:4925	Specification for concrete batching and mixing plant.
IS:11993	Code of Practice for use of screed board concrete vibrators.
G	Formwork
IS:4990	Specifications for plywood for concrete shuttering work.
IRC:87	Guidelines for the design and erection of false work for road bridges.
IS:806	Code of practice for use of steel tubes in general building construction.
IS:1161	Specification of steel tubes for structural purposes.
IS:1239	Specification for mild steel tubes. Tubulars and other wrought steel fittings.
H	Gypsum and Gypsum Board
IS:2095	Gypsum plaster boards
IS:2542 (Part 1/Sec 1 to 12)	Methods of test for gypsum plaster, concrete and products: plaster and concrete
IS:2542 (Part 2/Sec 1 to 8)	Methods of test for gypsum plaster, concrete and products: Gypsum products
IS:2547 (Part 1)	Gypsum building plaster: Excluding premixed lightweight plaster
IS:2547 (Part 2)	Gypsum building plaster: Premixed lightweight plaster
I	Handling and Storage
IS:4082	Recommendation of Stacking and Storage of construction materials
IS:8348	Code of practice for stacking and packing of stone slabs for transportation
J	Instruments For Testing Cement and Concrete
IS:5513	Specification for vicat apparatus.
IS:5514	Specification for apparatus used in Le-Chaterlier test.
IS:5515	Specification for compaction factor apparatus.
IS:7320	Specification for concrete slump test apparatus.
IS:7325	Specification for apparatus to determine constituents of fresh concrete.

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IS:10080	Specification for vibration machine.
IS:10086	Specification for moulds for use in tests of cement and concrete.
IS:10510	Specification for vee-bee consistometer.
K	Joint Fillers
IS:1838 (Part 1)	Preformed fillers for expansion joint in concrete pavements and structures (non extruding and resilient type): Bitumen impregnated fibre
L	Paints and Coatings
IS:102	Ready mixed paint, brushing, red lead, non-setting, priming
IS:109	Ready mixed paint, brushing, priming, plaster, to Indian Standard Colour No. 361 and 631 white and off white.
IS:347	Varnish, shellac, for general purpose.
IS:2074	Ready mixed paint, air drying, red oxide-zinc chrome, priming
BS:6496	Specification for powder organic coatings for application and stoving to aluminium alloy extrusions, sheet and preformed sections for external architectural purposes, and for the finish on aluminium alloy extrusions, sheet and preformed sections coated with powder organic coatings
BS:EN:10152	Specification for electrolytically zinc coated cold rolled steel flat products. Technical delivery conditions
ASTM A 164-71	Specification for electrodeposited coatings of zinc on steel
M	Pigment for Cement
BS:1014	Specification for pigments for Portland cement and Portland cement products
N	Reinforcement & Structural Steel
IS:280	Mild steel wire for general engineering purposes
IS:432	Part I. Mild steel and medium tensile steel bars. Part II Hard drawn steel wire.
IS:814	Parts I & II. Electrodes for metal arc welding of structural steel.
IS:815	Classification coding of covered electrodes for metal arc welding of structural steels
IS:816	Code of Practice for use of metal arc welding for general construction in mild steel.
IS:1566	(Part I) Specifications for hard-drawn steel wire fabric for concrete reinforcement.

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IS:1786	Specification for high strength deformed steel bars and wires for concrete reinforcement.
IS:2502	Code of Practice for bending and fixing of bars for concrete reinforcement.
IS:2629	Recommended practice for hot-dip galvanising of iron and steel.
IS:2751	Code of Practice for welding of mild steel plain and deformed bars for reinforced concrete construction.
IS:4759	Hot-dip zinc coating on structural steel and other allied products.
IS:5525	Recommendations for detailing of reinforcement in reinforced concrete works
IS:9417	Recommendations for welding cold-worked steel bars for reinforced concrete construction.
IS:14268	Uncoated stress relieved low relaxation steel class 2 for Pre-stressed concrete
IS:226	Structural steel (Standard Quality)
IS:800	Code of practice for use of structural steel in general building construction.
IS:813	Scheme of symbols for welding.
IS:814	Covered electrodes for metal arc welding of structural steel. (Part I & Part II)
IS:816	Code of practice for use of metal arc welding for general construction in mild steel.
IS:822	Code of practice for inspection of welds.
IS:961	Structural steel (High Tensile)
IS:1024	Code of practice for use of welding in bridges and structures subject to dynamic loading.
IS:1161	Steel tubes for structural purposes.
IS:1182	Recommended practice for radiographic examination of fusion welded butt joints in steel plates.
IS:2062	Structural steel (Fusion welding quality)
IS:3757	Specification for high tensile friction grip bolts.
IS:5624	Specification for foundation bolts.
IS:3600	Code of practice for testing of fusion welded (Part I) joints and weld metal in steel.
IS:4923	Hollow steel sections for structural use.
IS:6227	Code of practice for use of metal arc welding in tubular structure.
IS:801	Code of practice for use of cold-formed light gauge steel structural members in general building construction.
IS:811	Specifications for cold-formed light gauge structural steel sections.
O	Sand
IS:383	Coarse and fine aggregates from natural sources for concrete.

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P	Scaffolding
IS:2750	Specification for steel scaffoldings
IS:3696 (Part 1)	Safety Code of scaffolds and ladders: Scaffolds
IS:3696 (Part 2)	Safety Code of scaffolds and ladders: Ladders
IS:4014 (Part 1)	Code of practice for steel tubular scaffolding: Definition and materials
IS:4014 (Part 2)	Code of practice for steel tubular scaffolding: Safety regulations for scaffolding
Q	Sealants
IS:10959	Glossary of terms for sealants for building purposes
IS:11433 (Part 1)	One part grade polysulphide base joint sealant: General requirements
IS:11433 (Part 2)	One part grade polysulphide base joint sealant: Methods of test
IS:13055	Methods of sampling and test for anaerobic adhesives and sealants
BS:5889	Specification for one-part gun grade silicone-based sealants.
R	Wood
IS:303	Plywood for General Purposes
IS:2202 (Part 1)	Wooden flush door shutters (solid core type): Plywood face panels
IS:2202 (Part 2)	Wooden flush door shutters (solid core (type): Particle face panels and hardboard face panels

4.0 PLAN UNDER WHICH THE WORKS ARE TO BE CARRIED OUT:

- 4.1 The drawings for the works can be seen in the office of Dy Chief Engineer/Const./North Central Railway, Allahabad. These drawings are meant for general guidance only and in terms of clause 7 of Special tender conditions and Instructions to Tenderer/s, Railway may suitably modify them, without making the Railway's liable for any claims on account of such changes or delay in modification of the plan.

5.0 SUPPLY OF DRAWINGS:

The Railway, during the course of execution of work shall supply detailed working drawings.

It may clearly be noted that the Chief Engineer/Const. / Dy Chief Engineer (Const.) shall have full power to make alterations in the drawings and to give such further instructions, directions as may appear to him necessary for the guidance of the contractor and for the officials for execution, completion and maintenance of the work.

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The plan and sites are subject to alterations to suit the local conditions as per requirement of the Railway and the contractors will have no claim on account of the change in plan and sites etc.

6.0 CEMENT:

- 6.1 Ordinary Portland cement grade-33/43 conforming to IS: 269 & 8112 or high strength ordinary Portland cement grade-53 conforming to relevant IS code IS: 12269 capable of achieving the required design concrete strength will generally be used. However, if PPC cement as per IS: 1489 Part 1 & 2 is used, necessary deduction shall be made as per relevant items in the schedule.
- 6.2 To improve the workability of concrete admixtures conforming to IS: 6925 and IS: 9103 could be permitted subject to satisfactory proven use. Admixtures generating hydrogen, nitrogen, chlorides etc. shall not be used.
- 6.3 Cement content in concrete for PSC work shall neither be less than 400 kg./cum of concrete nor more than 500 kg./cum of concrete in design mix.
- 6.4 Quality test certificate for cement as per IS Code shall be furnished by the contractor before use of Cement supplied.
- 6.5 Railway may also take samples during the course of execution of works and get the cement tested to ascertain its conformity to the relevant IS specifications at contractor's cost before particular lot is put to use. Frequency of testing shall be as prescribed by the relevant IS Code.

Following tests shall be carried out: -

- i) Fineness
- ii) Compressive strength
- iii) Initial and final setting time
- iv) Consistency
- v) Soundness

7.0 SUPPLY OF CEMENT BY CONTRACTOR:

Supply of cement by contractor at the prescribed rates as per relevant NS Item will be governed by the following conditions.

- 7.1 The contractor shall procure cement for use in the works from the main producers or their authorized dealers only.
- 7.2 Cement older than 3 months from the date of manufacture as marked on the bags shall not be accepted. Cement bags preferably in HDPE bags packing should bear the following markings: -
- (i) Manufacturer's name.
 - (ii) Registered trademark of manufacturer, if any.
 - (iii) Type of cement.

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- (iv) Weight of each bag in kg /Tonne.
 - (v) Time/period of manufacture generally marked as week of the year/year of manufacture.
- 7.3 Railway may also take samples during the course of execution of works and get cement tested to ascertain its conformity to the relevant IS specifications at contractor's cost before a particular lot is put to use. Frequency of testing shall be as prescribed by the relevant IS Code. Following test inter alia shall be carried out:
- (i) Fineness
 - (ii) Compressive strength
 - (iii) Initial and final setting time.
 - (iv) Consistency
 - (v) Soundness.
- 7.4 In case samples tested do not pass the quality tests conducted, the entire batch of cement supplied shall be rejected and returned to the contractor.
- 7.5 For storage of cement, the contractor shall have to construct a temporary Godown of adequate capacity at his own cost. The contractor shall bring the cement to the site of work only on written instructions from Engineer-in-charge of work. It will be obligatory on the part of the contractor to get every consignment/truck of cement weighed in the presence of Inspector in charge or his representative and supply and original copy of weight slip along with consignment. The Inspector in charge will verify the Qty. of cement brought to the site of work and return one verified weigh slip to the contractor after the same is stacked inside the cement Godown under his supervision.
- 7.6 The record of cement brought to the site of work, daily consumption, daily opening balance and closing balance shall be maintained at site jointly by the Inspector In-charge of work and contractor or his authorized representative. For this purpose 2 set of registers duly reconciled and signed by the contractor and the Inspector in charge of work certifying the opening balance consumption, closing balance should be maintained. One register each shall be kept in the custody of Inspector in charge of work and the contractor or his representative.
- 7.7 The contractor shall be the custodian of cement godown and shall keep the godown under his lock and key to ensure safe custody of cement. The contractor shall ensure that cement once brought to the site and accounted for shall be used at the site only and shall not be taken away from site for any other purpose.
- 7.8 The contractor shall make the cement godown available to the site Engineer or his representative as and when required.
- 7.9 Land for constructing the temporary cement godown shall be handed over by the Railway on the written request of the contractor free of any rent.

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7.10 The contractor shall ensure that after completion of the work and/or determination of the contract for any reason whatsoever, the temporary cement godown shall be dismantled and all dismantled material/debris shall be removed and the clear site shall be handed over back to Railways. All the released material shall be the property of the contractor and no payment shall be made by the Railway for dismantling etc. The final bill & Earnest Money/Security deposit shall not be released unless the godown is dismantled and the site is cleared in all respects.

7.11 Tolerance requirements for the mass of cement.

- (i) Cement supplied at one time will be taken as forming one batch. The number of bags taken for sample from each batch shall be as under: -

Batch		Size	Sample size
100	To	150	20
151	To	280	32
281	To	500	50
501	To	1200	80
1201	To	3200	125
3201	And	Above	200

The bags in sample shall be selected at random.

- (ii) The number of bags in sample showing a minus error greater than 2 percent of the specified net mass (50 kg) shall be not more than 5 percent of the bags in the sample. Also the minus error in none of such bags in the sample shall exceed 4 percent of the specified net mass of cement in the bag. In case the minus error exceeds the percentage herein specified, the entire batch of cement sample shall be rejected.
- (iii) In case of a wagon/truck load of 10 to 25 Tonnes, the overall tolerance on net mass of cement shall be 0 to + 0.5 percent. Any batch of cement not conforming to above tolerance will be rejected.

7.12 The consumption of cement on works shall be assessed on the basis of cement contents per unit quantity for various items of work as per NCR/SOR-2006. In case of Designed Mix of Concrete of specified strength where the cement is to be used by weight where specially ordered in the N.S. items rate or tender conditions, a variation of + 1% (Max) will be allowed in the consumption of cement on works.

7.13 Stacking of cement in the godown shall be done on a layer of wooden sleepers, so as to avoid contact of cement bags with the floor or alternatively scrap G.I. sheets may also be used in place of sleepers but these must be placed at least 20 cm above the floor. The bags shall be stacked at least 30 cm clear of the walls to prevent deterioration. The wooden Sleepers/Scrap G.I. sheets shall be arranged by the contractor at his own cost.

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Cement shall be stored in such a manner so as to permit easy access for proper inspection. Cement should be stacked not more than ten bags layers high to prevent bursting of bags in the bottom layers and formation of clods. The stacks of cement bags shall be covered with tarpaulin during rainy season/rains so as to obviate the possibility of deterioration of cement by moisture in the atmosphere. Cement, which is set or partially set, is on no account to be used.

- 7.14 The cement brought to the site Godown in excess of the requirement calculated based on the cement factors shall be taken back by the contractor on completion of the work after written permission from SSE/SE/Works (in-charge of the work) on proper documents.
- 7.15 Payment as per relevant N.S. item will be made on the basis of quantity of cement actually consumed and the quantity calculated as per cement factors for various items, whichever is less subject to recovery as per clause 8.16 below.
- 7.16 Cement actually consumed on works shall normally match the quantity calculated as per cement factors for various items. If, it is discovered that the cement actually consumed at site is less than the quantity ascertained taking in to consideration the cement factors for various items by more than 1%, the cost of the cement not so used (i.e. difference between the quantity of cement calculated as per cement factors and cement actually consumed) shall be recovered at double the quoted rate from the contractor.
- 7.17 Empty cement bags will be the property of the contractor.
- 7.18 Cement and steel for use in the works should be procured by the contractor from the main producers/ their authorized dealers/authorized stockyards and these should conform to IS Specifications.
- 7.19 Railway reserves their right to prohibit the use of any cement bag/bags notwithstanding the fact the same may have been approved previously.
- 7.20 Requisite facilities for testing the cement will be provided by the contractor at his own cost at a location specified by the Railway.

9.0 PROCUREMENT OF RAW MATERIAL:

- 9.1 The cement, steel, CI pipes & their fittings including all other materials required for the work will have to be arranged by the contractor. The Railway will not supply any material. The contractor shall make his own arrangements for procurement of these materials in time for expeditious completion of the work covered in the contract. The Railway shall not be responsible for any loss or any damage incurred by the contractor in connection with such procurement of materials or expeditious completion of the work.

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10.0 INSPECTION OF MATERIAL:

- 10.1 Inspection of materials like steel/cement to be procured/procured by the contractor will be carried out by the Railway or their nominees for which atleast one-week notice must be given to the Railway or their nominee.
- 10.2 Quality test certificate for cement and steel as per relevant I.S. code or as desired by Engineer-in-charge shall be furnished by the contractor at his own cost from the manufacturer/test houses before use. In case of samples tested do not pass the quality tests conducted the entire quantity of the batch of cement/steel supplied shall be rejected and returned to the contractor at his cost.

11.0 CERTIFICATION OF INSPECTION AND APPROVAL:

- 11.1 Material shall not be used in any case in the work until and unless it is certified by the Engineer or their nominee in writing that they have inspected the material and approved by them.

12.0 SERVICE ROAD:

- 12.1 Any service road required by the contractor for his/their use along the alignment will be provided by the contractor and his/their tendered rates will be deemed to include the cost of provision & maintenance of service road as required by the contractor.
- 12.2 The Railway constructs and maintains service roads according to their requirement and convenience. However, the contractors will be permitted to use the service road free of cost but no claim will be entertained for non-provision of service road in any stretch whatsoever.

13.0 MEASUREMENT:

- 13.1 All work will be paid for at the tendered rates on the basis of actual measurements taken at site. Individual rate for each non-schedule item should be for complete finished work, inclusive of all operational charges. Nothing extra will be payable on any account.

14.0 PLAIN/REINFORCED CEMENT CONCRETE WORKS

- 14.1 The ISI and IRS code of practices for the structural use of reinforced concrete in bridges and building shall form part of the specifications for the above work.
- 14.2 The IS: 456-2000 code of practice for the structural use of reinforced concrete in building shall form part of all RCC items as additional specifications and this code and standard practice in reinforced concrete construction involved by the adoption of this code shall be followed.

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15.0 FINE AGGREGATES (SAND)

- 15.1 Coarse sand of approved quality and to North Central Railway standard specifications shall be used as fine aggregate for cement concrete/reinforced cement concrete/controlled concrete & RBC. Sand shall be clean and absolutely free from dirt and mixture of earth, Kankar or other deleterious matter. Local pit/river sand shall under no circumstances be permitted for any such works.

16.0 COARSE AGGREGATES:

- 16.1 The coarse aggregate which may be either stone ballast or chips, should be well graded & preferably machine broken and should conform to IRS standard specifications and shall be obtained from approved quarries. The stone should be free from soft, thin, elongated or laminated or decayed pieces. The aggregates should be free from dust. Cleaning and washing if necessary should be carried out as per directions of the Engineer or his representatives.
- 16.2 The mention of the sources by the Railway does not however, excuse the contractor/s of his/their liability to ensure that the coarse sand, stone chips and ballast as may be required for the work are strictly in accordance with the Standard Specifications. In case these materials cannot be had according to specifications from these sources the same could be procured from other sources by obtaining prior permission of the Engineer provided the materials are according to Standard Specifications.
- 16.3 In addition to the routine tests, special tests on materials will be carried out whenever required by the Engineer. The cost of the specific tests will be borne by the Railway, if the results are as per standards laid down, failing which the cost of these tests will be borne by the contractor. Necessary facilities in the form of supply of moulds, cones, scales, materials, labour for casting, curing specimen and such other facilities as are pre-requisite to any standard concrete tests will in any case be afforded by the contractor/s.
- 16.4 If at any stage of the work during or after placing the concrete in the structures the work is found defective, such defective concrete work shall be dismantled by the contractor and the work re-done with fresh concrete and with adequate and rigid formwork at the cost of the contractor.
- 16.5 Wherever chamfer or rounded corners are mentioned in the drawing, formwork should be such that no chiseling or cutting is required.

17.0 FORM WORK AND SHUTTERING

- 17.1 These specifications shall be read in conjunction with the CPWD specifications 1996, MOST Specifications and other relevant specifications described in the section 1.1 of these specifications.

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17.2 Materials:

Formwork shall be of timber, plywood (including marine plywood), steel or any other suitable material capable of resisting damage to the contact faces under normal conditions of erecting forms, fixing steel and placing concrete. The selection of materials suitable for the Contractor shall make formwork based on the quality consistent with the specified finishes and safety. For designated areas prominently in public view like piers, caps, portals, viaduct (cast-in-situ or pre-cast), parapet etc., only steel shuttering shall be used.

All formwork supports (centring, props, scaffolds etc.) shall only be in structural steel and preferably of pipes conforming to IS: 806, IS: 1161, IS: 1239, IS: 2750. All props shall be properly braced using x & k bracings.

Timber:

Timber used for formwork shall be easily workable with nails without splitting. It shall be stable and not liable to warp when exposed to sun and rain or wetted during concreting.

Plywood:

Plywood used for formwork shall be minimum 12 mm thick. Shuttering quality plywood complying with IS: 4990 and of make approved by the Engineer. Suitable stiffeners and walers shall be provided depending on the shuttering design.

Steel:

Steel formwork shall be made of minimum 4 mm thick black sheets stiffened with angle iron frame made out of M.S. angles 40 mm x 6 mm supported at suitable spacing.

17.3 Design & Drawings:

The formwork, false work, staging scheme etc. shall be designed by the Contractor and approved by the Engineer before starting of work. It shall be constructed so that the concrete can be properly placed and thoroughly compacted to obtain the required shape, position and level subject to specified tolerances. It is the responsibility of the Contractor to obtain the results required by the Engineer, whether or not some of the work is sub-contracted. Approval of the proposed formwork by the Engineer will not diminish the Contractor's responsibility for the satisfactory performance of the formwork, nor for the safety and co-ordination of all operations.

The design of false work should be such as to facilitate easy and safe access to all parts for proper inspection.

Methodology for removal of form should be planned as a part of total formwork design.

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In case of pre-stressing concrete, careful consideration shall be given to re-distribution of loads due to pre-stressing.

17.4 Formwork for Exposed Concrete Surfaces:

The facing formwork, unless indicated otherwise on drawings, or specifically approved by the Engineer in writing, shall generally be made with materials not less than the thickness mentioned below for different elements of the structure:

- 1 Plain slab soffits, and sides of beams, girders, joists and ribs and side of walls, fins, parapets, pardis, sun-breakers, etc shall be made with:
 - a) Steel plates not less than 4mm thick of specified sizes stiffened with a suitable structural framework, fabricated true to plane
 - b) Timber planks of 20mm actual thickness and of specified surface finish, width and reasonable length,
 - c) Plywood not less than 12mm thick (IS:4990 - Specification for Plywood for Concrete Shuttering Work) or 3mm thick plywood with a 20mm timber plank backing, of specified sizes stiffened with a suitable timber framework. At joints 6mm/ 10mm sponge to be provided.
- 2 Bottoms of beams, girders and ribs, sides of columns shall be made with:
 - a) Steel plates not less than 5mm thick of specified sizes stiffened with a suitable structural framework, fabricated true to plane
 - b) Timber planks of 35mm actual thickness and of specified surface finish, width and reasonable length,
 - c) Plywood plates not less than 12mm thick, of specified sizes stiffened with a suitable timber framework.
 - e) For Precast segments, piers, pier heads, portals etc. suitable steel formwork is to be used unless as specified by Engineer.

17.5 Formwork for Sloped Surfaces:

Forms for sloped surfaces shall be built so that the formwork can be placed board-by-board immediately ahead of concrete placement so as to enable ready access for placement, vibration inspection and finishing of the concrete.

The formwork shall also be built so that the boards can be removed one by one from the bottom up as soon as the concrete has attained sufficient stiffness to prevent sagging. Surfaces of construction joints and finished surfaces with slopes steeper than 2 horizontal: 1 vertical shall be formed as required herein.

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17.6 Formwork for Curved Surfaces:

The contractor shall interpolate intermediate sections as necessary and shall construct the forms so that the curvature will be continuous between sections. Where necessary to meet requirements for curvature, the form lumber shall be built up of laminated splices cut to make tight, smooth form surfaces. After the forms have been constructed, all surface imperfections shall be corrected and all surface irregularities at matching faces of form material shall be dressed to the specified curvature.

17.7 Erection of Formwork:

The following shall apply to all formwork:

To avoid delay and unnecessary rejection, the Contractor shall obtain the approval of the Engineer for the design of forms and the type of material used before fabricating the forms. (Ref. ACI 347 Formwork for Concrete or equivalent I.S. Code).

All shuttering planks and plates shall be adequately backed to the satisfaction of the Engineer by a sufficient number and size of walers or framework to ensure rigidity during concreting. All shutters shall be adequately strutted, braced and propped to the satisfaction of the Engineer to prevent deflection under deadweight of concrete and superimposed live load of workmen, materials and plant, and to withstand vibration.

- 1 Vertical props shall be supported on wedges or other measures shall be taken where the props can be gently lowered vertically during removal of the formwork. Props for an upper level shall be placed directly over those in the level immediately below, and the lowest props shall bear on a sufficiently strong area. Care shall be taken that all formwork is set plumb and true to line and level or camber or better where required and as specified by the Engineer.
- 2 Provision shall be made for adjustment of supporting struts where necessary. When reinforcement passes through the formwork care should be taken to ensure close fitting joints against the steel bars so as to avoid loss of fines during the compaction of concrete.
- 3 If the formwork is held together by bolts, these shall be so fixed that no iron will be exposed on surfaces against which concrete is to be laid. In any case wires shall not be used with exposed concrete formwork. The Engineer may at his discretion allow the Contractor to use tie-bolts running through the concrete and the Contractor shall decide the location and size of such tie-bolts in consultation with the Engineer. Holes left in the concrete by these tie-bolts shall be filled as specified by the Engineer at no extra cost.
- 4 Provision shall be made in the shuttering for beams, columns, and walls for a port hole of convenient size so that all extraneous materials that may be collected could be removed just prior to concreting.

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- 5 Formwork shall be so arranged as to permit removal of forms without jarring the concrete. Wedges, clamps and bolts shall be used wherever practicable instead of nails.

The formwork for beams and slabs shall be so erected so that forms on the sides of the beams and the soffit of slabs can be removed without disturbing the beam bottoms or props under beams.

- 6 Surfaces of forms in contact with concrete shall be oiled with a mould oil of approved quality from releasing agent or clean diesel oil. If required by the Engineer the contractor shall execute different parts of the work with different mould oils to enable the Engineer to select the most suitable. The use of oil, which results in blemishes of the surface of the concrete, shall not be allowed. Oil shall be applied before reinforcement has been placed and care shall be taken that no oil comes in contact with the reinforcement while it is being placed in position. Nothing extra shall be paid to contractor for oiling.

- 7 Immediately before concreting is commenced, the formwork shall be carefully examined to ensure the following:

- a) Removal of all dirt, shavings, sawdust and other refuse by brushing and washing.
- b) The tightness of joints between panels of sheathing and between these and any hardened core.
- c) The correct location of tie bars, bracing and spacers, and especially connections of bracing.
- d) That all wedges are secured and firm in position.
- e) That provision is made for traffic on formwork not to bear directly on reinforcing steel.

- 8 The Contractor shall obtain the Engineer's approval for dimensional accuracies of the work and for the general arrangement of propping and bracing. (IS: 3696 - Safety Code of Scaffolds and Ladders, IS: 4014 Steel Tubular Scaffolding II & I). All scaffolding and staging shall be either of steel tubes or built up section of rolled steel with adequate bracing at several levels in each perpendicular direction connecting each prop. In addition to this diagonal bracing should be provided in elevation ideally at 45 degrees or between 30 and 60 degree. The Contractor shall be entirely responsible for the adequacy of propping, and for keeping the wedges and other locking arrangements undisturbed through the decentering period. (IS: 8989 Safety code for erection of concrete framed structures)

- 9 Formwork shall be continuously watched during the process of concreting. If during concreting any weakness develops and formwork shows any

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distress the work shall be stopped and remedial action as directed by the engineer shall be taken.

17.8 Concrete Finishes:

This section deals with the surface of concrete on which forms had been fixed while concreting.

Formed Surface:

Allowable deviation from plumb or level and from the alignment profile, grades and dimensions shown on the drawings is defined as "tolerance" and is to be distinguished from irregularities in finishes as described herein. Tolerances in concrete construction are specified elsewhere.

The classes of finish and requirements for finishing of concrete surface shall be as shown on the drawings or as hereinafter specified. In the event of finishing not being definitely specified herein or in the drawings, finishes to be adopted shall be as directed by the Engineer.

Completed concrete surface shall be tested, where necessary to determine whether surface irregularities are within the limits specified hereinafter.

Surface irregularities are classified as "Abrupt" or "Gradual". Offsets caused by displaced or misplaced form sheathing, or form sections or by loose knots or otherwise defective timber form will be considered as abrupt irregularities, and shall be tested by direct measurements. All other irregularities shall be considered as gradual irregularities and will be tested by use of template, consisting of a straight edge or the equivalent thereof for curved surfaces. The length of the template shall be 150 cm for testing of formed surfaces and 300 cm for testing of unformed surfaces.

The classes of finish for formed concrete surfaces are designated by one of the symbols F1, F2, F3 and F4. Unless otherwise specified or indicated on drawings, these classes of finish shall apply as follows:

Finish F1:

This finish applies to surfaces where roughness is not objectionable, or surface that will otherwise be permanently concealed. Surface treatment shall be the repair of defective concrete, correction of surface depressions deeper than 25 mm and filling of tie rod holes. Form sheathing will not leak mortar when concrete is vibrated. Forms may be manufactured with a minimum of refinement.

Finish F2:

This finish is required on surfaces permanently but not prominently exposed to public view for which other finishes are not specified except F1. Forms shall be manufactured in a workmanlike manner to the required offsets or

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bulges. Surface irregularities shall not exceed 5mm for abrupt and 8mm for gradual irregularities measured with a 1.5 m template.

Finish F3:

This finish is required for coarse textured concrete surfaces intended to receive plaster, stucco or wainscoting. Surface irregularities shall not exceed 5mm for both abrupt and gradual irregularities.

Finish F4:

This finish is designated for surfaces prominently exposed to public view where appearance is also of special importance. This shall include piers of bridges, viaducts, beams, parapets, railings and decorative features on the structure and on the bridges. To meet with requirements for F4 finish, forms shall be manufactured in a skilful, workmanlike manner, accurately to dimensions. There should be no visible offsets, bulges or misalignment of concrete. At construction joints, the forms shall be rightly set and securely anchored close to the joint. Abrupt and gradual irregularities shall not exceed 3mm. Irregularities exceeding this limit shall be reduced by grinding to a level of 1:20 ratio of height to length. Jute bag subbing or sand blasting shall not be used.

Un-formed Surfaces:

The classes of finish for unformed surfaces are designated by symbols U1, U2, U3 and U4. Unless otherwise specified or indicated on drawings, these classes of finish shall apply as follows:

Finish U1:

This finish applies to unformed surfaces that will be concealed permanently or otherwise where a screeded surface finish meets the functional requirements. Finish U1 is also used as the stage of finishes for U2 and U3. Finishing operations shall consist of sufficient leveling and screening to produce an even uniform surface. Surface irregularities shall not exceed 10mm.

Finish U2:

This is floated finish, and used on all outdoor, unformed surfaces. Finish U2 is also used as the second stage of finish for U3. Floating to be performed manually or mechanically on stiffened screed surface shall be minimum to produce textured surface. If finish U3 is to be applied, floating shall be continued till a small amount of mortar without excess water is brought to the surfaces so as to permit effective trowelling. Surface irregularities shall be removed as directed by the Engineer.

Finish U3:

This is a trowelled finish and shall be used for tops of parapets, etc prominently exposed to view. When the floated surface has hardened sufficiently, steel trowelling shall be started. Steel trowelling on hardened, floated surface shall be performed with firm pressure to produce a dense uniform surface free from blemishes and trowel marks and having slightly glossy appearance. Surface irregularities shall not exceed 5mm.

Finish U4:

This is a steel-trowelled finish, similar to finish U3, except that light surface pitting and light trowel marks such as obtained from the use of machine trowelling will be acceptable, provided that surface irregularities do not exceed the limits specified for finish U3.

Unformed surfaces which are nominally level shall be sloped for drainage as shown on drawings or as directed by Engineer unless the use of other slopes or level surface is indicated on drawings. Narrow surface such as tops of parapets, walls and kerbs shall be sloped approximately 1cm per 30cm of width. Broader surface such as roadways, platform and decks, shall be sloped approximately half centimeter per 30cm of width. Finishes of floor and roof slabs shall be sloped, if required, by the Engineer.

17.9 Exposed Concrete Work:

Exposed concrete surfaces shall be smooth and even, originally as stripped without any finishing or rendering. Where directed by the Engineer, the surface shall be rubbed with carborundum stone immediately on striking the forms. The

Contractor shall exercise special care and supervision of formwork and concreting to ensure that the cast members are made true to their sizes, shapes and positions and to produce the surface patterns desired. No honeycombing shall be allowed. The Contractor as directed by the Engineer shall remove honeycombed parts of the concrete and fresh concrete placed without extra cost, as instructed by the Engineer. All materials, sizes and layouts of formwork including the locations for their joints shall have prior approval of the Engineer.

17.10 Age of Concrete at Removal of Formwork:

In accordance with CPWD Specifications 96 or IS: 456. The Engineer may vary the periods specified if he considers it necessary. Immediately after the forms are removed, they shall be cleaned with a jet of water and a soft brush.

17.11 Stripping of Formwork:

The work of formwork removal should be planned and a definite scheme of operation worked out. Formwork shall be removed carefully without jarring

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the concrete, and curing of the concrete shall be commenced immediately. Concrete surfaces to be exposed shall, where required by the Engineer, be rubbed down with carborundum stone or bush-hammer to obtain a smooth and even finish. Where the concrete requires plastering or other finish later the concrete surface shall be immediately hacked lightly all over as directed by the Engineer. No extra charge will be allowed to the Contractor for such work on concrete surfaces after removal of forms.

17.12 Reuse of Forms:

The Contractor shall not be permitted reuse of timber facing formwork brought new on the works more than 5 times for exposed concrete formwork and 8 times for ordinary formwork. 5 or 8 uses shall be permitted only if forms are properly cared for, stored and repaired after each use. The Engineer may in his absolute discretion order rejection of any forms he considers unfit for use for a particular item irrespective of no of items the shuttering has been used and order removal from the site of any forms he considers unfit for use in the Works. Used forms brought on the site will be allowed proportionately fewer uses as decided by the Engineer. Use of different quality boards or the use of old and new boards in the same formwork shall not be allowed. If any other type of special or proprietary formwork is used, the no. of times they can be used will be determined by the Engineer.

17.13 Formwork for Pre-cast/ Pre-stressed Concrete:

The provisions in this section shall be considered supplementary to the general provisions stated above and additional Technical Specifications for pre cast segments. Pre-cast concrete members and panels shall be made in accurately constructed moulds, on a properly prepared casting bed. All aspects of the making, curing and erection of pre-cast units shall be subject to the approval of the Engineer.

The contractor shall submit detailed drawings of formwork for the approval of the Engineer. Finishing with cement mortar shall not be allowed.

The formwork should be so designed that it does not restrain the shrinkage movements and possible shortening due to pre-stress of the concrete. The formwork shall be of sturdy construction with special considerations to shutter vibrators when used. All edges and joints of the formwork should be designed and sealed so that no cement grout can escape and there is no wedging or keying to the concrete. The effect of curing on the formwork should be given special consideration. Depending on care, curing erection and maintenance after stripping, the following number of uses can be made with different types of formwork.

Plywood with timber-backed formwork - As per satisfaction of Engineer

Steel moulds

No of uses of shuttering be as per approval of the Engineer

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In cases concrete moulds can be satisfactorily provided by the contractor, the Engineer's approval shall be obtained before use on the works.

Stripping:

As soon as the pre-cast units have attained sufficient strength, the formwork shall be stripped. The pre-cast unit shall be lifted uniformly out of the formwork without being subjected to tilting or restraint effects.

- 17.14 If proprietary system of formwork is used, detailed information as given in Annexure 4.1 shall be furnished to Engineer for approval before use.

18.0 EXCAVATION IN FOUNDATION:

- 18.1 These items envisage excavation in foundations for the contracted work and other incidental works connected there with, with the site depth and locations of such excavations being as per the railway's drawings and the site requirements as directed by the engineer or his representative.

- 18.2 Without in any way restricting or modifying the provisions of the general conditions of contract in this regard the rates for the above items of works shall be inclusive of all costs of the following elements: -

- (a) All items of works for excavation in foundations their maintenance etc. complete-
- (b) Excavation of the work as per the standard specification as amended up to the date of award of the contract.
- (c) Disposal of the excavated materials in a manner as directed by the Engineer or his representative with all leads, lifts, descents, crossings etc. complete materials in a manner as directed by the engineer and/or subsequent filling in foundation pits form such soil dumps/stacks or construction of pathways or access roads etc. at the locations indicated by the Engineer, the decision of the Engineer in this regard being final & conclusive.
- (d) All costs of contractor's labour, materials, consumables, explosives, tools, plants and machinery etc. complete for the above.

19.0 PILE FOUNDATION:

- 19.1 Construction of pile foundation shall be strictly in accordance with the stipulations made in the I.S. 2911 Part 3: 1980 (with up to date amendment) for under reamed piles and IRC-78: 1983.

- 19.2 The rates quoted by the contractor/s shall be inclusive of all rates (including cost of cement & steel to be supplied by the contractor). The rate also includes manufacturing, driving piles through all types of soils including boulders and such other obstructions as may be encountered at site such as driving through old foundations of structures, CC blocks etc. including anchoring inside rock/find strata to the extant necessary as per design and as

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desired by the Engineer. The rates is also inclusive of provision of special liner if required; and all tools and plants including all royalties, freights, all lead, lift, crossing of running tracks and labour employed for the purpose of efficient execution of the work. No extra payment whatsoever be made on this account.

- 19.3 For the purpose of payment length of the pile will be measured from the bottom of the pile/pile shoe to the bottom of the pile cap. Any earthwork necessary for the casting and driving of the piles will not be paid separately and the rate should be inclusive of all such work as may be necessary.
- 19.4 The design for the pile cap will be supplied by the Railway. The rate shall include breaking of piles heads cutting, bending hooking and binding pile reinforcement and dowager, if any, shuttering and vibrating the concrete and curing etc. complete.
- 19.5 Steel reinforcement be kept projecting above the pile as per details indicated in the approved plan to serve as anchorage in the pile cap. The finished top of the pile shall project 75mm inside of bottom pile cap.
- 19.6 The rate of the pile cap shall be led to include the cost of excavating, disposal of excavated spoil as directed by the Engineer from the edge of the excavation.
- 19.7 No additional payment shall be paid for extra reinforcement used in overlaps or due to change in sizes/dia of reinforcement bar.

20.0 REINFORCEMENT CONCRETE M-20/25/30:

- 20.1 These items of work envisage plain or reinforced cement concrete works (of approved design only as specified) as appropriate in structures and their components above ground.

Without in any way restricting or modifying the provisions of the General conditions of contract in this regard rates for the above items of works shall be inclusive of all costs of the following elements: -

- a) Formulating a design mix of the required strength in the manner specified in the relevant standard specification and / or IS specification as appropriate. The concrete Mix shall be prepared by weighting the in gradients of concrete.
- b) Providing, scaffolding, staging, platforms and other temporary structures for supporting the shuttering, connecting, shoring, strutting, connecting, machinery to complete as required for execution of the work.
- c) Providing and fixing to correct line, level, size and shape and shuttering of steel plates, welded and steel framed panel and / or approved quality ply-wood panels fixed with counter sunk screws on steel/wooden framed panels of design materials and construction to the satisfaction and acceptable to the Engineer or his representative, the fixing of the shuttering being done in a manner to obtain leak

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proof joints in the panel to prevent and liquid from lacking out of the concrete during placing or compacting of the concrete by vibration or any other approved method and the strength of the over all shuttering arrangement with its individual elements being such as to prevent any distortions after the concrete is placed so as to obtain as smooth, evenly finished surface which is expected to be left with and as east texture without any further rendering/treatment.

- d) For RCC work as appropriate, straightening, cutting, bending placing, binding etc. complete of railway steel reinforcement as per approved drawing/requirements with all contractor's material and labour.
- e) Mixing, transporting, lifting, placing vibrating and testing of cement concrete in structures and their components above ground level in all conditions and confirming to the relevant standard specifications and / or IS Specifications as appropriate.
- f) All leads including crossing of roads, railway lines nallahs, water streams and all lifts/descents for laying the cement concrete above the ground level.
- g) All cost of contractor's labour, materials, consumable, tools, plants and machinery etc., complete for the above except steel, which shall be paid separately under specific item.

For the purpose of determining the quantities of the work above ground level under the above items, the Engineer shall determine the average ground level or his representative as related to the original ground levels, with in the periphery of the work, his decision in this regards being final and conclusive.

The measurement for the payment shall be worked out to the nearest 0.01 m³ with the size of the cement concrete elements being determined as per the dimensions specifications the approved drawing/requirements as directed by the Engineer or his representative without any deductions for the Anchor Rod or Dowel bars or the stoneware/AC pipes fixed as weep holes.

21.0 SITE INSTALLATION:

- a) No separate item has been proposed for transporting and installing at site, machineries, plants, equipments of every description required for the successful execution and completion of the work referred to in the tender documents and for removing the site installation or completion of the work and restoring the site to the original condition. The same should be catered for in the site of foundation. Nothing extra will be paid for transporting of the above mentioned machineries, tools, plants, equipment, labour etc., to the site of work or back from the work site so ever as may arise.

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- b) Dewatering, if any, required for executing any item of work is included in the item of work and nothing extra will be paid even for such contingencies. Ground water table of the area is not investigated and the contractor may investigate the same to ascertain the ground water table in the vicinity of actual site of work.

22.0 CONCRETING

- 22.1 The contractor shall design the concrete mix and get the same approved by the Engineer. Necessary corrections as required from time to time during the progress of the work shall be carried out by the contractor and got approved by the engineer-In-Charge. Mix design shall be carried out as per guidelines in IS-10262: 1982 or any other standard approved method. Rates for all cement concrete/reinforced cement concrete items shall include all expenses on account of and incidental to concrete design and corrections there to from time to time and nothing extra shall be payable on this account.
- 22.2 The concrete shall be compacted immediately after placing by means of mechanical vibrators of approved quality design for continuous operation.
- 22.3 The contractor will be responsible for giving the smooth surface of the concrete and no payment will be made for any finishing work done for giving smooth surface of the exposed concrete.

23.0 STEEL FOR REINFORCEMENT:

- 23.1 Any steel specified for reinforcement shall be as per provision of Indian Railway Unified Standard Specification (Works & material) 2010.

23.2 Inspection & Testing:

Every bar shall be inspected before assembling on the works and any defective, brittle, excessively rusted or burnt bars shall be removed. Cracked ends of bars shall be cut out.

No work shall be commenced without the Engineer's approval of the bar bending schedule.

Specimens sufficient for three Tensile Tests for each different size of bar for each consignment delivered, or for 10 tonnes of supply of that size, whichever is less shall be sampled and tested by the Contractor. Batches shall be rejected if the average results of each batch are not in accordance with the specifications.

- 23.3 Testing shall be done for Tensile test as per IS: 1600 and Bend test shall be done as per IS: 1599 and other physical properties.

23.4 Bar bending and Bar bending Schedule:

All bars will be carefully and accurately bent by approved means in accordance with IS: 2502, and relevant drawings. It shall be ensured that

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depth of crank is correct as per the bar cutting and bending schedule. Bent bars are not straightened for use in any manner that will injure the material.

Prior to starting bar bending work, the Contractor shall prepare bar bending schedule from the structural drawings supplied to him and get the same approved by Engineer. Any discrepancies and inaccuracies found by the Contractor in the drawings shall be immediately reported to the Engineer whose interpretation and decision there to, shall be accepted.

23.5 Lapping & welding:

- 1 As far as possible bars of the maximum length available shall be used. Laps shown on drawings or otherwise specified by the Engineer will be based on the use by the Contractor of bars of maximum length. In case the Contractor wishes to use shorter bars, laps shall be provided at the Contractor's cost in the manner and at the locations approved by the Engineer.
- 2 Bars having butt or lap welds shall be provided as specified in the drawings or as instructed by the Engineer.

23.6 Spacing, Supporting and cleaning:

- 1 All reinforcement shall be placed and maintained in the positions shown on the drawings.
- 2 The Contractor shall provide approved types of supports as specified on the drawings for maintaining the top bars of the slab in position during concreting. Generally, cover blocks shall be of concrete (not sand cement mortar) and of the same strength as that of the surrounding concrete and properly compacted. They shall be circular in shape for side cover and square for bottom cover. The cost of cover block shall be deemed to have been included in the rates.
3. Bars must be cleaned before concreting commences of all scale, rust or partially set concrete which may have been deposited there during placing of previous lift of concrete.

23.7 Welding:

- 1 Wherever specified all lap and butt-welding of bars shall be carried in accordance with IS: 2571. Only qualified welders shall be permitted to carry out such welding.
- 2 For cold twisted reinforcement welding operations must be controlled to prevent a supply of large amounts of heat larger than that can be dissipated. The extreme non-twisted end portion shall be cut off before welding. Electrodes with rutile coating should be used.
- 3 Bars shall be free from rust at the joints to be welded.

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- 4 Slag produced in welding after alternative run should be chipped and removed by brush.
- 5 Electrode should not be lighted by touching the hot bar.
- 6 The welding procedure shall be approved by the Engineer and tests shall be made to prove the soundness of the welded connection.

23.8 Measurement:

Payment for the reinforcement shall be made on the basis of standard unit weights per metre to the extent actually consumed on the work as per approved drawings and nothing extra will be paid for unauthorised over laps and wastage of steel involved in cutting the bars to their required sizes. Nothing extra will be payable for over weight steel and no deduction will be made for underweight steel within the limit of tolerances permitted as per IS: 1786 – 1985.

23.9 CURING:

- 23.10 All concrete work/RCC work/Brick work in cement mortar plaster/pointing etc. shall be continuously cured for the prescribed period as per direction of the Engineer. Covering the newly laid concrete with gunny bags and keeping them wet constantly shall do curing. If it is found that contractor is not properly observing these instructions the Engineer may undertake the curing through another Agency/labour without any notice to the contractor at the cost of the contractor. The cost incurred along with supervision charges @ 12½% of the cost will be debited to the contractor. Intimation of the employment of another agency for curing will be given to the contractor as soon as possible. This intimation in writing to the contractor under the hand of the Engineer-In-Charge of the work shall be conclusive evidence of the employment of another agency.
- 23.11 For RCC work laying of concrete after 24 hours the surface shall be cured by ponding with water for a minimum period of 7 days from the date of placing of concrete in the case of OPC and at least 10 days where blended cements are used.

24.0 RATES

- 24.1 For all item rates for cement concrete and reinforced cement concrete under non-schedule items the tendered rates shall include the cost of supplying, fixing and removal of the scaffolding where required. Supply of form work, shuttering etc. of approved design, their erection, dismantling cleaning and oiling etc. screening and washing the aggregate, mixing mechanically the concrete and placing the same in position. Provision and use of equipment including mechanical mixer, vibrators etc. curing the work for the prescribed period and rendering, plastering finishing exposed surface with carborandum stone wherever required, uncoiling strengthening, curing,

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hooking, bending, binding and placing and maintaining in position of reinforcement including cost of binding wire. Nothing extra shall be payable to the contractor on this account.

25.0 BRICK WORK:

- 25.1 All brick work shall be done in well burnt bricks as per Ch.1 of North Central Railway Standard Specifications 2007 in cement mortar in proportions as may be specified in the drawings or as instructed by the Engineer.
- 25.2 The brick shall be strictly in accordance with Railway specifications and sample deposited with tender and as approved passed by the Engineer-in-charge before use in the work.
- 25.3 All pipes, conduits, clamps or other fittings as may be required shall be fixed in position as the work proceeds (conduits, claims and other fittings whatever is not covered by the scope of Schedule of Rates and quantities of this tender shall supplied as per N.S. item if required) Chassis will have to be cut in the brick walls before housing and fittings and the contractor/s rate for brick work shall be inclusive of the cost of cutting chassis.
- 25.4 No claim for any additional labour involved in doing masonry work around switchboard, telephone boxes etc. shall be entertained.
- 25.5 Sand used for brickwork shall from Yamuna River or any other source approved by the Engineer-in-charge.

26.0 WOOD WORK

- 26.1 The timber shall be good approved quality and well seasoned. It shall have uniform colour and shall be free from knots, cracks, shakes and sap wood.
- 26.2 All joinery work shall be taken in hand by the contractor/s as per detailed drawings or as directed by the Engineer-In-Charge immediately after the award of work. The contractor/s shall got all the shutters approved in writing at site of work by the authorized representative of the Engineer-in-charge before fixing the same. The shutters shall not be painted, oiled, waked or treated in any other way before these are approved in writing.
- 26.3 All fittings shall be got approved from the Engineer-In-Charge before fixing.
- 26.4 Commercial block board shall be ISI approved phenol bonded, anti-termite, anti-border and boiling water resistant. However, Railway will take sample and get the material tested from the laboratory to ascertain the conforming of the materials as per IS specifications at contractor's own cost.
- 26.5 Size of holdfasts required for fixing wooden chowkhats shall be 6 mm x 40 mm and payment for the same shall be made accordingly.

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27.0 GLAZING FOR WINDOWS

27.1 Glazing where required shall be done with first class glazing panes (free from flaws, speaks or bubbles) weighting 24 oz. Per sq. ft. for clear openings up to 4 sq. ft. in area, 32 oz. Glass for longer openings. Glazing for window panes of bath rooms lavatories and at other places, specified shall be with frosted glass pin head glass of approved design and quality and nothing extra shall be paid as per North Central Railway SOR-2006 subject to tender percentage.

**28.0 ROUGHCAST SAND FACED PEBBLEDASH CEMENT PLASTER
20 MM THICK**

28.1 All brick masonry shall be thoroughly wetted and joints raked out to a depth of at least ½ inch and in walls washed with clean fresh water and thoroughly wetted for 3 hours before plastering is done.

28.2 Roughcast/sand faced/pebble dash cement plaster shall be done in two layers. Bottom layer 1½" thick shall be made with coarse sand, cement 1:2 and the top layer ½" thick shall be provided with rough/cast/sand faced/pebble according the pattern approved in case of sand faced plaster/desired finish shall be brought about by sponges. Sample shall be got approved from Engineer-In-Charge before commencement of work and work shall be done strictly according to approved samples.

29.0 STEEL WORK WELDED IN BUILT UP SECTION

29.1 The IRS code of practice for electric welding of mild steel structures shall be followed wherever welding is required to be carried out.

29.2 Welding shall generally be done by electric process. All necessary equipment appliances and materials shall be arranged by the contractor/s

29.3 As far as possible efforts shall be made to limit the welding that must be done after the structure so as to avoid improper welding.

30.0 WATER SUPPLY AND SANITARY INSTALLATIONS

30.1 For execution of sanitary installations, water supply work the contractor/s shall arrange labour and all materials confirmed to relevant Indian Standard Specifications including cement required for the work in case of supply of cement by the party otherwise the cement will be supplied by the Railway free of cost.

30.2 The tender is inclusive of all sanitary and water supply fittings work license plumber and specially skilled artisan shall be employed by the contractor for sanitary installation work.

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- 30.3 The work of providing G.I./A.C./H.C.I. pipes required shall proceed along with the construction of the building to avoid demolition or breaking up of masonry at later stage.
- 30.4 Samples of sanitary installations and fittings such as W.C. Pan wash-hand basin sinks etc. shall be submitted to the Engineer-in-Charge for approval before supplying and fixing the same. The contractor/s shall ensure that all fittings provided by him/them are strictly in accordance with approved sample and approved/passed by Engineer in writing.
- 30.5 The contractor/s shall not dig pits within Railway land for extracting shingle or earth for mortar, which must be arranged from outside by the contractor/s himself/themselves at his/their own cost. Earth required for mortar shall be brought by the contractor/s from outside the Railway land for which the Railway will pay no lead, lift or royalty or any other charges.
- 30.6 All work shall be done strictly in accordance with the approved drawings and no departure shall be made by the contractor/s without the order of the Engineer given to him/them in writing.
- 30.7 G.I./C.I. pipes and fittings shall conform to ISI specifications and samples shall be got approved/passed from Engineer-In-Charge before using the materials in the work in writing.
- 30.8 R.C.C. pipes for sewers should conform to NP 2 class of pipe specifications as contained in IS 485-71. These should be tested and certified by approved testing agencies/laboratories and certificate to this effect should be produced by the contractor/s if asked for approved of material by the Engineer. Nothing extra will be paid for testing and certification by testing agency/laboratory.

31.0 PRE-CAST R.C. LINTELS WITH MASONRY WALLING:

- 31.1 The pre-cast R.C. lintels shall be 75 mm (3"0) thick and (9") 228 mm wide for 228 mm (9") thick walls. The width may be increased as per requirements of the wall thickness. The reinforcement of 228 (mm) lintels shall be 3 bars of 10 mm dia placed centrally. The top surface of the pre-cast lintels shall be finished rough to provide key with the brickwork on top. After, the lintel has been placed in position minimum 6 layers of brick work shall be laid on top of the lintel in cement mortar not weaker than 1:6. The bearing for the pre-cast lintels shall be 150 mm to 225 mm. The lintels shall be temporarily supported to a length of about 30 cm. In middle till the brickwork gains necessary strength.
- 31.2 When chajja is required to be projected from the lintel, chajja and the RCC portion of the lintel shall be laid monolithically in situ.

32.0 PAINTING:

- 32.1 Standard brands of paints and primers as per relevant ISI Codes and as approved by Engineer-In-Charge shall be for painting woodwork and steel

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work. The rates over the cost of all labour and materials, ladders, scaffolding, tools, plants, and equipment (including brushes) of approved pattern at contractor's expenses. Mode of measurement for payment shall be same as detailed in the book of North Central Railway Standard Schedule of Rates'2006 and Standard Specifications for materials and works'2007.

33.0 INFRASTRUCTURE SET UP:

33.1 Before starting the work, the contractor shall provide the following infrastructure set-up to facilitate the execution of the work as per the stipulation, at their own cost.

Temporary office/building with computer for data transfer, preparation of bar charts, statements, variations etc. electricity/water facilities without any extra cost, exclusively for the official use of Railway Officials.

Testing laboratory with following equipments.

- i) Weight machine with weight
- ii) Sieve analysis testing apparatus/equipment
- iii) Graduated measuring jar
- iv) Cube testing machine of capacity 120 tonnes
- vi) 20 Nos. cube moulds of size 15 x 15 x 15 cm.
- vii) Ovan
- viii) Tubs for curing of the cubes.

Following tests shall be conducted prior to supply of the building materials as per code given below at the cost of the contractor & test reports shall be kept in record.

- i) Cement test as per IS: 269/8112/12269
- ii) Building bricks as per IS 1077
- iii) Stone aggregate as per IS 383
- iv) White cement as per IS-8042
- v) Water proof compound as per IS 2645
- vi) Tor steel as per IS: 1786
- vii) GI pipes as per IS: 1239
- viii) SCI pipe as per IS: 1729
- ix) Water for construction as per IS: 456-2000
- x) Flush doors as per IS 2202
- xi) Block board as per IS: 1659
- xii) Identification of wood and moisture contents from Govt. Laboratory.

All fittings and materials shall be got approved from the engineer-in-charge in advance and one set of these shall be displayed in a display room (adjoining temporary office) of size 15'x25' minimum, duly signed by engineer. These will include samples of flush doors, ply wood, block board, teak wood samples, door/window fittings, paint, distemper, ceramic tiles, other tiles, make and brand of cement/steel, bricks, aggregates, bathroom installations and fittings, marble chips, water proofing compound etc. This, room shall be all the relevant IS codes mentioned in specifications, on

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display, at no extra cost. On completion of work, these shall be the property of the contractor.

34.0 ROAD WORK

35.1 Works shall be executed as per CPWD specifications/Ministry of surface Transport specifications for the Road work with latest correction slips as applicable.

35.0 CONTRACTOR'S SUPERVISION:

35.1 The contractor shall be required to employ qualified technical person together with necessary supervising staff; during providing tube wells and construction of pump houses. The contractor or his authorized representative, approved in writing by Engineer shall be available at all times for supervision of the work & receiving directions, written communications signing site records on behalf of the contractor. The contractor shall not change any of his supervisory staff employed on the work unless approved by Engineer in-charge of work.

35.2 The contractor shall employ the following technical staff during execution of the work.

- (i) At least one graduate engineer when the cost of work to be executed is Rs. 15 Lakhs and above.
- (ii) At least one qualified diploma holder when the cost of work to be executed is more than Rs. 5 Lakhs but less than Rs. 15 Lakhs.

35.3 Technical staff should be available at site required by the engineer-in-charge to take instructions. In the case contractor failed to employ the technical staff as aforesaid, he shall be liable to pay a reasonable amount to the Railway not exceeding a sum of Rs. 15,000/- (Fifteen thousand) only for each month of default in case of Graduate Engineer and Rs. 8,000/- (Eight thousand) only for each month of default in case of Diploma Holder.

The decision of the Engineer-in-charge as to the period for which required technical staff was not employed by the contractor and as to the reasonableness of the amount to be deducted from the contractor, shall be final & binding on the contractor.

36.0 PENALTIES DUE TO UNSAFE WORK:

- a) In the event of accident at the work site, a departmental enquiry shall be held and in case it is established that the accident has occurred on account of contractor's negligence or the negligence of his men, penalties up to an upper limit of 10% of the total cost of the work shall be imposed on the contractor.
- b) Railway administration reserves the right to terminate the contract with immediate effect if the contractor is found responsible for causing an accident without giving any further notice/notices to the

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contractor. In the event of contractor not completing the work or leaving it unsafe at the end of days work so they may serve speed restrictions if required to be imposed, track shall be attended to by the railway immediately at the contractor's cost without any further notice.

37.0 LABOUR:

- 37.1 The Principal Contractor/s will be held responsible for the compliance with provision of **Wages Act 1936** and Rules framed there under even in respect of labour employed in his/their sub contractor in the execution of the work contracted by him/them.
- 37.2 The contractor/s shall carry out the provision of any regulation that may be enforced in the area in which work is to be done prohibiting the recruitment of local labour.
- 37.3 The contractor/s shall obtain license from the appropriate licensing officer of the area before commencement of the work and shall produce a copy thereof along with the original to the Dy. CE /Const. to start the work.
- 37.4 In any case in which by virtue of relevant sections of the **Contract labour (Regulation and Abolition) Act 1970**, the Railway is obliged to provide amenities and or pay wages to labour employed by the contractor or through petty contractor or sub contractor/s under this contract, then the contractor shall indemnify the Railway fully and Railway shall be entitled to recover from the contractor the expenditure incurred on providing the said amenities and or wages so paid by deducting it from the security deposit or from any sum due to the contractor (from the Railway) provided that if any dispute arises as to the expenditure incurred by the Railway or provisions of the said amenities, the decision of the Engineer shall be final and binding.
- 37.5 The contractor/s shall provide Rest shelters, Latrines and Urinals, Washing facilities, First aid and Medical facilities strictly in accordance with the provision of relevant sections of Contractor Labour Central Rules – 1989. If the contractor does not provide these facilities, within the stipulated periods, the Railway will provide these and the cost of the same will be recovered from the contractor/s.
- 37.6 The Railway will not take responsibility or make arrangements for **Supply of Food -Stuff** to the contractor/s his/their staff or labourers.
- 37.7 The contractor shall make his/their own arrangement at his/their own cost for **Supply of Water** to his/their staff and labour and the Railway under take no responsibility for supply of Water to the contractor/s his/their staff or labour or for the work.
- 37.8 The contractor shall take all precautionary measures in order to ensure protection of their own personal moving about or working on the Railway premises and shall have to conform to the **Rules and Regulation of the**

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North Central Railway. If unforeseen accident or injury happens while on working the contractor shall be solely responsible for the same.

37.9 The contractor/s shall keep/maintain necessary Register/Record, issued employment Cards, & Service certificates to be displayed on the board in accordance with the relevant sections of the **Labour Contract Act Rules-1971**.

38.0 FIRST AID:

38.1 The contractor shall maintain in a readily accessible site first aid appliance including adequate supply of sterilised cotton wool. The appliances shall be placed under the charge of responsible person who shall be readily available during working hours.

39.0 TELEPHONE/MOBILE FACILITIES:

39.1 The contractor shall have to make his own arrangements for providing telephone/mobile facilities at the site of work at his own cost. The telephone facilities provided by the contractor shall be allowed to be used by the Railway staff without any charge.

40.0 RECORDS AND REGISTERS:

40.1 The contractor shall maintain accurate record, plans and charts showing the dates and progress of all main operations and the Engineer shall have access to this information at all reasonable times. Records of tests made shall be handed over to the Engineer's representative after carrying out the tests.

40.2 The following registers will be maintained at site by the contractor/s

(i) **Site Order Register:**

The contractor shall promptly sign orders given therein by the Engineer or his representative or his superior officers and comply with them. The contractor shall report the compliance to the Engineer in good time so that it can be checked.

(ii) **Cement Register:**

This register will be maintained to accord daily receipt and issue of the Cement duly indicating the balance quantity. The quantum of work done for the Cement issued on particular date will also be mentioned.

(iii) **Steel Register;**

This register will record the receipts of Steel items and details of reinforcement and members, wherever Steel is used.

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(iv) **Labour Register:**

This register will be maintained to show daily strength of labour in different categories employed by the contractor.

(v) **Plant and Machinery Register:**

This register will record daily particulars of machinery with the contractor and will be signed jointly by the Engineer's representative and the contractor.

(vi) Log Book of Events

(vii) Compaction Registers

(viii) Soil, Samples Test Register

41.0 MACHINERY AND PLANT:

41.1 The contractor will be entirely responsible to arrange all necessary machinery, i.e. rig machine, concrete mixers, vibrators, compressors, pumps, pneumatic equipment's, dredges, derricks, cranes, service girders, staging, motor vehicles, trailer tools and plants and their spare parts required for sufficient and methodical execution of work and transport them to the site of work. Delay in procurement of such items due to their non-availability on account of import difficulties or any other cause whatsoever, will not be taken as excuse for slow or non-performance of the work. Safety of plants and machinery will be the responsibility of the contractor and for any loss due to any cause or wash away in flood, or otherwise, no claim will be entertained on this account whatsoever.

41.2 The Railway may give on hire to the contractor any plant or equipment, if available. But it will not entertain any claim due to the railway's failure to do so nor can be Railway inability to supply such plant taken as an excuse for slow progress or non-performance of the work.

41.3 If, the Railway loans any plant to the contractor on hire, charge will be levied, as detailed below and separate agreement will have to be entered into before the plant is issued.

A) The cost of the plant for the purpose of calculating the hire charges shall be its book value plus freight charges and all other incidental charges to which supervision charges at the rate of 12-1/2% of total cost will be added.

B) The charges per annum will be calculated at the following rates on the cost of plant as per (A) above.

i) Ordinary repair and maintenance charges 5%.

ii) Interest on the capital cost at the ruling rate, dividend payable by the Railway to the General Revenue.

iii) Special repairs and maintenance charges @ 10%.

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iv) Depreciation charges at the following rates

Light plant -- 15% per annum.

Heavy plant -- 10% per annum.

Special plant -- 6% per annum.

The classification of the plants shall be as per para 3502 of Indian Railway Way and Works Manual.

An additional 10% on the total (i) to (iv) above to meet contingencies.

41.4 The hire charges per day shall be arrived at by dividing the annual hire charges vide (A) & (B) above by 250 which shall be assumed number of working days in a year for this purpose. These hire charges will be payable from the day the plant is handed over till it is returned by the firm/contractor to the Railway Administration. However, during this period if the plant remains out of order for reasons beyond the control of the hirers or is sent for periodical overhaul, such periods shall not be counted for levy of hire charges provided; the Engineer gives a certificate to that effect. In case of any difference of opinion between the Engineer and the contractor the decision of the Dy Chief Engineer/Const. will be final and binding.

42.0 PERFORMANCE GUARANTEE OF ANTI TERMITE TREATMENT ETC.

- (1) The Guarantee period for item relating antitermite and roof leakage works shall be **five years**
- (2) In addition to the submission of Performance Guarantee and Security Deposit for the contracts as per the existing provisions, the contractor(s) will also submit a “guarantee amount” against the value of such works of roof leakage treatment, termite treatment, etc. as a guarantee of satisfactory & effective performance of the treatment works as executed by him/them to the satisfaction of engineer-in-charge for a complete guarantee period of such works as specified in tender conditions in terms of item (1) above and as a guarantee for carrying out fully or partially necessary repairs or replacements as and when directed by the engineer-in-charge.

The “guarantee amount” for such treatment works will be submitted by the contractor (s) in the following method and manner:

- (a) The “guarantee amount” will be equal to full value of such work/items of roof leakage treatment, termite treatment, etc.
- (b) The guarantee will be submitted in the form of “Irrevocable Bank Guarantee”.
- © The guarantee will have the validity upto the full guarantee period as so specified in the tender conditions for subject works of treatment.
- (d) The guarantee will be submitted by the contractor (s) before signing of the agreement.

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- (3) In case of exclusive contracts for the works of roof treatment, termite treatment etc, the **maintenance period** of the work to be specified in the contract for releasing the **security deposit of the work** will be the same as the guarantee period as so specified in the tender conditions in terms of item (1) above. It means that in such exclusive contracts, maintenance period and the guarantee period will be the same.

In such contracts, both the **security deposit and guarantee amount will be released only after satisfactory completion of the guarantee period as specified** in the tender conditions and on certification by the competent authority in this regard. The competent authority shall normally be authority who is competent to sign the contract. If this competent authority is of the rank lower than JA Grade, then a JA Grade Officer (concerned with the work) should issue the certificate. The certificate, inter-alia, should mention that the work has been completed in all respects and that all the contractual obligations have been fulfilled by the contractor(s) and that there is no due from the contractor(s) to the Railways against the contract concerned.

The Performance Guarantee will, however, continue to be released as per the existing provisions with amendment, if any, from time to time.

- (4) In case of such contracts, where the works of roof leakage treatment, termite treatment are part item(s) of the contract as a whole, the guarantee amount submitted by the contractor(s) for such items of works will be independently released only on satisfactory completion of the guarantee period as specified in the tender conditions for such items of works and submission of certificate in this regard with no claim from the competent authority as described in Para (3) above. In such contracts, the **Performance Guarantee and Security Deposit for the contract as a whole will continue to be released as per the existing provisions with amendment, if any, from time to time.**

- (5) The engineer-in-charge will ensure that a proper register and record is maintained for periodical inspections/observations and recording complaints, if any for such type of treatment works and contractor(s) is/are directed accordingly for carrying out the necessary repairs or replacements during the guarantee period. Contractor/authorized representative will sign the register in token of having noted the complaints/defects and also on compliance, jointly with engineer-in-charge. Such records and registers maintained will be put up by engineer-in-charge to the competent authority while releasing the guarantee amount.

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43.0 Rates

- 43.1 The rates given in the attached schedule of rates and quantities as tendered by the contractor /s and accepted by the Railway will form the basis of payment for such items under this contract.

44.0 Programming for day to day work

- 44.1 Programming for each day's work will be made available by the contractor in consultation with the Engineer or his representative at least two days in advance and he will draw all the P.Way materials required for the day's work and arrange to lead them to the site in advance. The contractor will also arrange sufficient labour for smooth execution of the work as per programme fixed.

45.0 P.Way Material

- 45.1 The P.Way materials required for the work is to be supplied free of cost by the Railway in accordance with schedule of Rates and quantities on receipt of written demand from the contractor/s. The Engineer/ his representative will scrutinise the same in accordance with the schedule of requirement and material will be issued on form W-91 (Pink Slip) or through Gate pass under clear acknowledgement of contractor/s or his/their authorised representative. On completion of the work site in-charge will submit the specification chart and store statement for work along with the final bill through AXEN/XEN/C, which will be checked technically and with the store return. The cost of material issued in excess of the specification chart (after technical check) but not returned by the contractor if any will also be recovered through the contractor's bill, in accordance with Tender Conditions.

46.0 Tools & Plants

- 46.1 For facilitating the work, Rail dollies/or any other T&P to the extent available with railway may be supplied on request to contractor on hire charges from the store of SE/C/P.Way on proper vouchers. For doing so requisite hire agreement is to be entered in to. These are to be returned to his store in good working condition after completion of the work. In case of damage or non return of such T&P to the stores, cost of the same will be recovered from the contractor at the market rate prevailing at the time to supply or at the book value rate which ever is higher plus fixed departmental charges i.e. freight @ 5% incidental charges 2% added with supervision charges @ 12½% on total cost arrived at as above.
- 46.2 The contractor shall be required to arrange for safe custody of tools and plants at all times. When the same are not being used and even when these are being used, the contractor shall ensure that labour does not use these tools and plants carelessly and/or infringe the running line in any manner. For this the contractor shall construct suitable tools boxes at a suitable location to be decided by the Engineer/his representative. Nothing extra in this account shall be payable to the contractor.

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47.0 Leading of Rails/Sleepers/Fastening

- 47.1 Leading of rails and sleepers if required, shall be done by the contractors using his own means viz. Rail dollies/deplorry/trailor /crane or any other means and with all contractors labour. The payment 'if any, shall be made under respective item of schedule of rates and quantities. All P.Way fittings shall be supplied to the contractor at SE/C/P.Way Store at Allahabad. If material issued from other place then transportation charges will be paid under relevant item. Contractor shall lead the same to the site of work at his own cost and nothing extra will be paid for transporting them.
- 47.2 Contractor is expected to make use of newly laid formation for doubling for leading of rails/ sleepers for further linking. Since the work is being done in the vicinity of the running line, contractor's representative at site shall supervise all leading of rails/sleepers so as not to infringe the adjacent running line and contractor shall provide barricading for the protection of existing track. In the event of any accident during leading, handling, assembling and linking of P.Way material or any accident on the existing running line arising out of contractor or his man not observing necessary safety precautions for the various operations required for the execution of this P.Way work, the contractor shall be fully responsible for all damages and also shall have to pay for the accident relief train arranged if required to be arranged.
- 47.3 No lead shall be payable for leading of rails and sleepers up to 1000 m as the same is included in the items for linking. Beyond 1000 m lead shall be payable under relevant item/s schedule of rates and quantities.
- 47.4 If the contractor desired to carry P.Way material on running line through dip lorry etc., the same shall not be done except under direct supervision of a Railway official not below the rank of JE/C/P.Way or P.Way supervisor. All look out men and other men for protection required as per Railway Rules shall be provided by Railway.
- 47.5 Block of the running line to the extent available shall be arranged for carriage of material on contractor's request. However, non-availability of blocks does not absolve the contractor of responsibility of timely completion of work and no claim whatsoever on this ground shall be entertained.

48.0 Rails for linking

- 48.1 Rails for linking shall be supplied un-drilled and contractor will have to drill the holes as required for linking for which no extra payments for drilling chamfering of holes will be paid and the same shall be deemed to have been included in the rates quoted for items for schedule of Rates and quantities.
- 48.2 Second hand (SH) rails for linking in loop lines may be required to be end cropped for which payment will be made as per relevant NS item.

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49.0 Dismantling

- 49.1 Dismantling of existing track shall be done for main line, Sidings, points & Crossing etc. as per plan and directions of the Engineer or his representative.
- 49.2 Before start of dismantling work, Railway Authorities will take a joint inventory with contractor/his authorised representative. All released materials after dismantling in connection with the work will be handed over to SE/P.Way/C as per joint inventory.

50.0 Dismantling of Turnouts/Traps

- 50.1 Dismantling of turnouts & traps shall be done very carefully, as they can be required at other location. This work may or may not be done in traffic block.
- 50.2 After dismantling of track, contractor has to link the track in main line to pass the train in safe condition. If track linking is not required at that place the payment of dismantling of turnout/trap shall be made after deduction of linking charges for straight track from nominated stations to heel for turnout/trap under consideration.
- 50.3 If the dismantled turnout material i.e. sleepers, switches & crossings etc. are required at other locations in the same yard, then no extra payment shall be made on account of shifting of material at the required place.
- 50.4 For passing of traffic safely, the contractor shall do one round of katchcha packing and one round of through packing of that place.

51.0 Dismantling of SEJ

- 51.1 Dismantling of SEJs may have to be done under speed restriction. This includes cutting of SEJ & providing required rail length to fill up the gap to pass the traffic after providing ordinary PSC sleeper in place of SEJ sleepers. The dismantling of SEJ has to be done very carefully so that the fittings and SEJs Rails are not damaged as these may be used at other locations. The welding of rails shall be paid separately under relevant NS item.
- 51.2 All the released rails and sleepers from track dismantled will be lead, classified and stacked as directed by Engineer-in-charge in the SE/P.Way/C/Store at nominated stations. The payment for transportation of rails, ferrous and wooden sleepers will be made under respective item. However, the released fittings will have to be transported in the store of SE/P.Way/C/Store free of cost. The transportation of released materials to be completed as early as possible. The released materials have to be classified, counted and paint marked as directed by Engineer-in-charge before stacking. The stacking of the released materials in the store of SE/C/P.Way shall have to be done at the locations as per guidance and directions of Engineer-in charge or his representative.

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- 51.3 All the released material after stacking in SE/P.Way/C/Store at suitable places shall be counted and it must tally with the inventory already taken. If any shortage is found, cost of the same will be recovered from the contractor's bill as per prevailing price list of P.Way material received from Head Quarter's Office from time to time added by supervision charges @ 12½%, freight charges @ 5% (8.33% for items of Iron & G.I Pipe and for steel) and incidental charges @ 2%.
- 51.4 Released PSC sleepers from loop lines may be re-used if so decided by the Engineer-in-charge or stacked in respective yards at appropriate locations as directed.
- 51.5 The work of dismantling of track is to be carried out either during the complete block or partial block or as directed by Engineer-in-charge. Nothing extra shall be paid if the work is delayed on account of non-availability of traffic blocks.
- 51.6 For the purpose of payment for leading, theoretical weight reduced @ 5% for the wear for the rails and sample weight for sleepers as decided by the Engineer-in charge shall be taken.

52.0 Leading and spreading of ballast

- 52.1 Spreading of ballast will be done by wire baskets. The ballast will be issued by the stacks available in Railway premises, Generally a consolidated bed of ballast rolled by light weight hand Roller, 3.5 m wide and depth as directed by Engineer-in-charge or his representative should be prepared by leading ballast before starting the linking operation and it should be got passed by Engineer or his representative. After completion of linking all the tracks should be properly boxed with proper ballast cushion, shoulders, cribs and slopes as per Standard specification for ballast profile as directed by the Engineer or his representative. No scattered ballast should be left out in the stacks and also in near by locations.
- 52.2 Generally ballast stacks are available along the track in each kilometre post. However, this may not happen in some locations and ballast is to be carted from adjoining locations, within a radius of 1000 meters. The NS item includes carting up to 1000 meters with all lead, lift, ascent, descent, crossing of nallahs and tracks etc. and as such no extra payment will be made for the same.
- 52.3 The ballast stacks as per ballast stack ledger will be handed over to the contractor for spreading. The payment of each stack will be made as per gross quantity paid for and available in measurement book of ballast supply.
- 52.4 Ballast shall be boxed and dressed up as per LWR/SWR profile.
- 52.5 Contractor shall be responsible for personal safety of his labour & animals deployed by him for carting and spreading of ballast.

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- 52.6 90% payment shall be released after putting of ballast stack in track and 10% shall be released after boxing & dressing of ballast as per LWR/SWR profile.

53.0 Linking of Track (B.G)

- 53.1 The linking will be done using 52 kg/60 kg Rails on PSC sleepers with 1660 or lower sleeper density on the main line/loop line with appropriate track fittings and fastenings.
- 53.2 Free Rails/long welded panel up to the block section length shall be available at different locations in yard and along the track in block section. The contractor will arrange for handling, re-handling crossing of running track/tracks and pairing the Rails for the purpose of Mobile flash butt welding/ linking at his own cost. At that time flash butt welding plant is not available contractor shall lay the rails on PSC sleepers after preparing ballast bed Nothing extra shall be paid for handling and leading of the rails for the initial leads of 1000 m. Additional lead for rails if any shall be payable as per relevant item in schedule of rates. Linking of the track shall be done in such a manner so that no damage of the rails/sleepers fittings etc. occurs during handling. The contractor's rates also include cuttings of rails wherever required, oiling and greasing of fishplates, fish bolts, fishing plane of rails and fittings as per requirement. Ballast shall be rammed/rolled by the contractor by suitable rammers/hand roller at his own cost before linking the track over it.
- 53.3 Before rails are placed on sleeper, these are to be paired properly for equal length after removing all the kinks including use of Jim Crow wherever required to the entire satisfaction of the Engineer/ his representative. The rails should be marked for required sleeper spacing with paint before linking is actually taken in hand.
- 53.4 The contractor will ensure that proper bed of ballast for laying sleepers so that rails laid on sleepers become perfectly aligned and surfaced after putting crib and shoulder ballast and levelled properly by providing fish plates with clamps, for the flash butt welding and fittings shall be provided if flash butt welding done after laying of track then contractor shall remove the fittings to free the rails ahead of welding machine and provide fittings after welding for that 5% extra track length shall be paid for the length welded on already linked track .If mobile flash butt welding plant available in advance then contractor shall pair the rails on cess of equal size for the welding .
- 53.5 The linking of the track will be done generally as per procedure laid down in Indian Railway Permanent Way Manual, 1999 (latest addition) with correction slips up to date and Chief Engineer, Central Railway's P.Way circulars.
- 53.6 Reference posts of scrap Rail pieces are to be provided with colour paint as directed. The NS item of linking includes this and as such no extra payment will be made, only scrap rails will be issued as per requirement.

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- 53.7 There may be some cases where linking of the track can not proceed continuously due to non-completion of formation and provision of ballast bed which may be under execution through another agency. In such cases, the contractor will be required to link the track in different stretches for which the decision of the Engineer / his representative of the work will be final and binding upon the contractor. Nothing extra shall be payable to the contractor on this account.
- 53.8 Utmost care should be taken during linking to ensure good quality of work, which on no account should be allowed to suffer.
- 53.9 Whenever the left over ballast is found lying along the cess or on the formation, such ballast shall be handled and put in track by the contractor free of cost.
- 53.10 Fabrication & fixing of check Rail/Guard Rail shall be paid as plain track linking. Hence, double payment will be made of that portion on which Guard Rail/check Rails are to be provided and nothing extra will be paid for fabrication.
- 53.11 This item includes all types of markings i.e. on curves, LWRs and other locations as required at site with contractors enamel paint of required shade and colour and labour etc.

Payments

- 53.12 The payment to the extent of 70% of rates for NS item of linking of track shall be released after the track has been assembled and linked and aligned over the prepared bed of ballast and passed by the Engineer or his authorised representative according to specifications and approved working drawings. Further, 20% more payment will be released after first Packing and balance 10% i.e. final payment shall be made only after the portion of the track has been finally passed by the Engineer or his representative according to the specification or approved working drawing and material account has been completed as per directions of Engineer.

54.0 Requirement of Track Geometry

- | | | |
|-------------------------|---|--|
| (i) Gauge | : | Sleeper to sleeper variation up to 2 mm (where PRC sleeper are being used, the same shall not be recorded for the purpose of contract. |
| (ii) Cross Level | : | ± 3 mm from the required level and super elevation. |
| (iii) Packing | : | Not more than 20% sleepers loose. |
| (iv) Alignment | : | On straight on 10 m chord ± 2 mm on curves of radius more than 600 m on 20 |

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m chord ± 5 mm on curves of radius less than 600 m ± 10 mm on 20 m chord.

- (v) **Sleeper spacing variation from the specified spacing ± 20 mm.** : Out of square ± 10 mm
Squareness of straight ± 10 mm
- (vi) **Joints** : On curves within half of the pitch of the boltholes. Low joints not permitted. High joints not more than 2 mm.

55.0 Deep Screening

- 55.1 The work of deep Screening shall be carried out in accordance with para 238 of IRPWM and Northern Railway Chief Engineers circulars.
- 55.2 While carrying out the work the contractor shall arrange for all tools and plants and also wooden blocks required supporting the rails during the deep screening.
- 55.3 The rates for deep screening shall include removal of all muck away from yard/formation and the contractor shall make his own arrangement for the carriage of the same without any extra cost.
- 55.4 Since the work is to be carried out under running traffic on existing loops, contractor shall arrange to take all safety precautions as per IRPWM-1999 (latest addition) and Central Railway/North Central Railway, CE circulars with correction slip up to date. In case of any accidents at the work spot to non-compliance with the instructions/working procedures compensation shall be recoverable from the contractor in accordance with condition of contract.
- 55.5 The scope of deep screening is on existing loop line P&C locations and that shall be carried out under S.R.
- 55.6 The width of deep screening shall be centre of track centres or 2.60 m from the centre of track on either side or as per site requirement.
- 55.7 Released muck shall be disposed off in low lying area or along the bank as directed by engineer in-charge or out side the Railway limit.
- 55.8 Contractor shall arrange screens and other T&P labour etc.
- 55.9 Wooden blocks shall be available in SE/P.Way/C store and that may be converted from U/S wooden sleeper by the contractor at his own in SE (P.Way)/Const./Store
- 55.10 Contractor shall ensure the safety of track during work.

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55.11 If any mis-happening occurs due to lack of working the penalty shall be imposed and action will be taken as per rules.

55.12 This item includes one round of katchcha packing and 1st packing.

55.13 Work shall be done as per the provision in IRPWM.

56.0 Linking of BG Turnouts

56.1 Turnout shall be linked during block or requisite speed restriction on running lines by interlacing of PSC sleepers for lead and crossing portion.

56.2 Switches may be linked out side and slewed during block.

56.3 The dismantling of track due to insertion of turnouts shall be paid separately under relevant NS items.

56.4 The turnouts/traps shall be linked as per RDSO drawing and specifications.

56.5 This item include making of lead rails as per required length drilling of holes greasing and oiling of fish plats and bolts.

56.5 80% payments shall be paid after linking of turnouts and balance 20% shall be paid after complete setting of switches and providing stretcher bars as per requirement and satisfaction of S&T department.

57.0 Linking of SEJ

57.1 The contractor will ensure that the proper expansion gaps are provided as per LWR manual and approved instructions. The contractor shall arrange sufficient number of rail thermometers to determine the correct expansion gaps.

57.2 PSC sleepers shall be available at stations no extra payment shall be made on account of leading them at the required locations.

57.3 This item also includes cost of providing reference posts for SEJs with marking and painting by enamel paint of required shade and colour as directed by Engineer.

58.0 Laying/insertion of glued joints

58.1 Glued joints shall be provided at pre decided locations as marked at site with the consultation of S&T department.

58.2 Contractor shall provide cut liners at glued joint fishplate by cutting the GFN liners at his own cost.

58.3 Glued joints shall generally be available in the store of SE/C/P.Way/ALD. These will be issued to the contractor on demand by him and their

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transportation will be paid under relevant item for leading. No payment for their transportation to site will be made.

- 58.4 If glued joint not available may also be carted from other locations as directed and their transportation will be paid under relevant item.
- 58.5 The welding if possible and done shall be paid under relevant NS item. If welding is not possible for any reason then joint will be fish plated by drilling holes and for which no extra payment will be made.

59.0 Cutting/end cropping of released rails

- 59.1 Cutting of Rails shall be done for second hand rails to make them in proper sizes for linking of loop lines.
- 59.2 The item includes contractor's labour T&P and all consumables required for the work.
- 59.3 Payment shall be made only for truly vertical cut.
- 59.4 The item also includes the marking of cut nos. on end of rail with paint for the verification and satisfaction of Engineer in charge.

60.0 P&F fouling marks

- 60.1 This item includes fabrication & fixing of fouling marks at required location as per direction of Engineer in charge.
- 60.2 This item includes white washing and marking on fouling marks with contractors labour and material as directed.

61.0 Fabrication and fixing dead end

- 61.1 Contractor shall fabricate the dead end as per RDSO drawing from available rail pieces and fix it with his own bolts at required location as per direction of Engineer in charge with his own labour T&P etc.
- 61.2 This item includes fixing of wooden sleepers available in PWI/C/Store or release from site and paints them with red paint and fixing them with longer size bolts to be fabricated by contractors with his own labour and material.

62.0 Dismantling and removal of existing dead ends

- 62.1 This item includes dismantling of existing dead ends/ sanded dead ends including levelling of bed up to formation level with own labour T&P etc.
- 62.2 Release material if any shall be deposited in SE/C/ALD store without any extra payment.

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63.0 Providing sanded end.

- 63.1 This item includes provision of sanded dead end on prepared formation level as per RDSO drawing as a complete job.
- 63.2 Bricks & sand shall be used for sanded dead end and to be arranged by the contractor at his own cost.

64.0 Tamping of Track

- 64.1 Tamping machines shall be supplied by Railway with operator. Contractor shall do required pre-tamping operations as per IRPWM.
- 64.2 Contractor shall provide vehicles for moment of machines and Railway staff during tamping of track.
- 64.3 Ballast shall be dressed in such a manner that no ballast should touch the machine rollers.
- 64.4 All fittings shall be provided and tightened properly.
- 64.5 Sleepers should be completely in square.
- 64.6 Level crossing check rail/road surface shall be opened out with contractor labour T&P etc.
- 64.7 Gauge shall be checked and corrected before tamping.
- 64.8 Guard rail/check rails shall be opened out by contractor with his own labour & T&P.
- 64.9 Re conditioning of tools shall be done by the contractor to make the size of tools 140 x 70 mm (standard) at all times by welding, if required, welding of plates for heavy wear tools.

64.10 During tamping

Contractor shall provide sufficient labour with tie-tamping machines & to work with machine operators as per their requirement.

64.11 Post tamping

Ballast pockets shall be filled up by the contractor by his own labour T&P etc. after every tamping.

- 64.12 Fittings to be provided and tightened after every tamping.

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65.0 De-stressing of LWR/CWR

- 65.1 De-stressing of track shall be done after complete laying of track and first packing of track or as directed by Engineer-in-charge.
- 65.2 Work shall be carried out at de-stressing temperature as per the decision of Engineer-in-charge or his representative.
- 65.3 All T&P required shall be arranged by contractor.
- 65.4 Work shall be carried out as per LWR manual and directions of Engineer in charge.

66.0 Replacing existing sleepers

- 66.1 This item includes replacing existing sleepers in existing running line and at other locations as per site requirement and instruction of Engineer in charge.
- 66.2 This item includes packing of sleepers, boxing and making ballast profile as per LWR manual.

67.0 Slewing of track

This item includes slewing of existing running track as per required alignment by ensuring safety of track and maintaining track parameters for passing traffic.

This item includes shifting of ballast and putting the same in to the track for crib and shoulders and packing of the track for the satisfaction of the engineer

68.0 Through Packing of Track/ Turnouts

This item will be operated for, when track taken over by construction organisation and traffic being passed on it. If track not taken over by open line for maintenance and tamping machines are not available for tamping

69.0 Painting of Rails

This item includes painting of 52/60 kg rails in track/outside track in all surfaces excluding top by approved quality of paint and approved by AXEN/XEN before starting the work.

70.0 Supply of Tools and Plants

All T&P shall be supplied by the contractor as per RDSO specifications and from RDSO approved suppliers.

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71.0 COMPLETION DRAWINGS:

71.1 On completion of the work the contractor is required to submit completion plan/drawings of yard plans duly incorporating all the changes. One copy on tracing paper and two prints copies of the work. The rates for supply of above shall be presumed to be included in the contract & the contractor would claim no separate payments.

72.0 SUPPLY OF PROGRESS PHOTOGRAPHS AND ALBUMS:

72.1 The work covers the supply of colour photographs preferably with digital camera, negatives and albums to serve as a permanent record of various stages/facets of work needed for an authentic documentation as approved by the Engineer.

72.2 The photographs shall be of acceptable quality and a professionally competent photographer shall take them with camera having the facility to record the date of the photographs taken in the prints and the negative. Each photograph in the album shall be suitably captioned.

72.3 The photographs, Albums and materials including negatives shall form a part of the records of North Central Railway and prints of the same cannot be supplied to any body else or published without the written permission North Central Railway. The rates for supply of above shall be presumed to be included in the contract & the contractor would claim no separate payments.

73.0 SUPPLY OF VIDEO CASSETTES:

73.1 The work covers taking video films of important activities of the works as directed by the Engineer during the currency of the Project and editing them to a video film of playing time not less than 120 minutes. It shall contain narration of the activities in English by a competent narrator. The edition of the film and script of the narration shall be approved by the Engineer.

73.2 The rates for supply of above shall be presumed to be included in the contract & the contractor would claim no separate payments.

74.0 TEMPORARY SITE OFFICE AND COMMUNICATION FACILITIES

74.1 The contractor shall have to make his own arrangements for providing mobile communication/telephone facilities at each site of the work for direct communication from site of work with the Engineer-in-charge at his own cost and contractor shall also provide inspection vehicle for the site engineer to inspect the site of works. The communication/telephone facilities provided by the contractor shall be allowed to be used by the railway staff without any charge.

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75.0 WATER

75.1 The contractor shall be responsible for the arrangement to obtain supply of water necessary for the works at his own cost and rates quoted include the cost of wells or any arrangements required to be made for procuring water and loading/ transporting/conducting water to the site of work, irrespective of the distance from the source quality of water as to relevant I.S.I. Specifications depending upon the type of work will have to be confirmed. Railway has no source of supply of water so far as construction of this work is concerned.

76.0 NOTICE TO PUBLIC BODIES

76.1 The contractor/s shall give to the municipality, police & other authorities all notices that may be required by law and obtain all requisite licences for temporary obstructions, enclosures & pay all fees, taxes and charges, which may be leviable on account of his operations in executing the contract. He should make good any damage to adjoining premises whether public or private and supply and maintain any lights etc. required at night.

77.0 PROTECTION AND STEPS TO BE TAKEN IN ORDER TO AVOID DANGERS TO RAILWAY INSTALLATIONS:

- a) At such of the locations where contractor/s road vehicle are permitted to ply adjacent to the running lines and yard, an experienced trackman shall be deputed as flagman by SE/C/P.way/ALD.
- b) If the work to be executed is in proximity of the running railway track, the contractor will be required to be followed all precautions and carry out all works that may be necessary to ensure the safety of the running track/trains, without imposition of any speed restriction thereon as may be directed by the engineer or his authorized representative. No claim whatsoever will be entertained for either any inconvenience caused to the contractor or for the rescheduling of the operations or for any other reasons on this account.
- c) The contractor shall take all precautionary measures in order to ensure protection of his own personnel moving about or working in the railway premises and shall have to conform to the rules and regulations of Railway. If any unforeseen accident or injury happens while on working, the contractor shall be solely responsible for the same.
- d) Within the station premises, especially on passenger platform, or near the running track, contractor/s shall ensure sufficient free space for movement of passenger traffic. He must cover and protect the excavation carried out in such areas with a view to avoid the accident. The works must be carried out most carefully in such a way that they do not hinder the railway operation except as agreed to by the railway.
- e) The contractor's employees and workers shall not for any reason operate any appliances or installation of the railway concerning the safety of the

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trains movements but they should whenever necessary notify to the qualified railway staff who will then take necessary steps.

- f) The contractors shall see that no change is caused to railway signalling and transmission wire, stations, installation, communication lines, electric devices, trains of any kind, fencing, as well as any rolling stock and in general to all railway installation and equipment in case of any damage is caused to these due to the fault of the contractor on the part of any one on his behalf all repairs there required will be carried out by the railway at the entire cost of the contractor and amount of expenses thus incurred will be recovered from the payment due to him.
- g) The contractor shall be responsible for safe custody of tools and for the safety of his labour. He should ensure that labour on work removes their tools clear of the tracks on the approach of any trains. After the day work, the contractor should ensure that the tools are deposited in proper toolbox before the labour proceeds for their homes. Tool issued should not be allowed to fall in and unwanted hand who can tamper with the railway track.
- h) The contractor shall employ one suitable supervisor to supervise the work at site. Though all the work relating to the safety of running trains shall be executed under railway supervisor and presence of qualified supervisor from the contractor's site is a must at the site of work. Contractor shall provide 150 mm-thick white line with lime at a distance of 3.5 m from centre of nearest existing track. This white line shall be in the entire length where work is going on and / or the vehicle / machinery is plying along the track. Nothing extra shall be paid for this.
- i) Barricading with the help of portable fencing shall be provided in the length where the days work is to be done in close vicinity of the track. The fencing shall consist of self-supporting steel column connected with at least 20mm thick red nylon rope. The column shall be of 1.2-m height. This will be placed at a distance of 3.5 M from centre line of the nearest track. No extra payment shall be done for this.
- j) Asstt. Officer/Sr Scale officer shall issue competency certificate after checking license and their working to all drivers of nominated vehicles / machinery. Inspector at site shall ensure that the driver who does not possess the competency certificate will not work at site.
- k) The area between running line and white line shall not be permitted to become slushy and adequate drainage must be ensured at all times.
- l) Machine / vehicle shall ply 6 m clear of track and movement/work at less than 6 m and up to 3.5 m of clear track center shall be done in the presence of the railway employee authorized by the Engineer in-charge. The railway employee so deputed shall ensure safety of the track, with banner flag, hand signal lamps and detonators.

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- m) If vehicle/ machinery/ materials are to come within 3.5 m of existing track, work must be done under the presence of an inspector authorized to do safety works. A caution order shall be issued and track will be protected with the banner flag, hand signal lamps and detonators.
- n) Normally, night working shall be avoided. A night working shall be permitted by AEN/SEN in writing. One inspector shall be specifically deputed to supervise the night working. The site/area where night working is to be done shall be adequately lit. Nothing extra shall be paid for this.

78.0 SAFETY OF TRACK AND MEN: -

- 78.1 The tenderer must note that the work is to be executed in the close proximity of running track. All labour and staff must be aware of the running trains. No tools and plants should be brought near the track to infringe the schedule of dimensions. Work very near to the track will be done only under the personal supervision of the authorised representative of the Engineer. Railway will not be responsible for any loss of life or property or delay in speed restrictions/block. It may be ensured that no shuttering scaffolding etc. infringes the schedule of dimensions at any time.
- 78.2 It may be noted by the contractor/tenderers that excavation/concreting in foundations is to be done in close proximity of the running track. No temporary arrangements are proposed in the running track to carryout the excavation/concreting. As such contractor may have to do additional works like shuttering, shoring, timbering etc. as per the direction of Engineer-In-Charge, so that earth does not give way underneath the track and is fully protected and there is no interruption to the movement of the Railway traffic.

79.0 GENERAL:

- 79.1 The contractor/s are required to complete the works within the specified period as provided in each Agreement/work order. Dy Chief Engineer is empowered to grant extension to the specified period provided in the work order, failing within the financial limits of the powers during the currency of the contract, if considered the same as justified or with penalty as per North Central Railway General Conditions of Contract Regulations and Instructions for tenderer/s and standard form of Contract 2010.
- 79.2 Every possible fluctuation in the market rates of labour, material & General conditions and other possibilities of such and every kind should be considered before quoting the rates and no claim due to any reasons whatsoever on this account will be entertained after wards sales tax or any other tax, levied or liveable by the Central or Sales Tax or any other taxes of State Govt. or local bodies, shall be borne by the contractor which should also be kept in view before tendering, no such taxes on contractor's labour and materials will be paid by the Railway.
- 79.3 The contractor will be required to give no claim certificate at the time of signing the final bill. Thus no claim certificate furnished by the contractor

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constitute special agreement under which contractor admits and acknowledged that no money is due to him in connection with executing of the particular contract by him. The contractor cannot turn round and ask for any more payment even if post audit records show that he had been paid less, hence after no claim certificate is given, the contractor cannot even ask for arbitration.

- 79.4 The contractor shall have to co-ordinate his work with other department's i.e. electric installation Signal interlocking work which may be related to other contractors or done departmentally. No claim of any kind whatsoever shall be entertained if the execution of any such work being also done by the department/contractor is held up due to their interference or as a result of delay in any of these works.
- 79.5 The tenderer/s should note that any person such as Engineer of the Gazetted rank and other Gazetted Officers whether in execution or Administrative duties in the Engineering Department, if pension-able or non-pension-able are not allowed to work as contractor/employee within two years of his/their retirement without proper approval of the competent authority. If any one found working as contractor or as employees of the contractor without prior approval of the competent authority, shall be liable to be rejected/terminated for breach of the tender conditions.
- 79.6 The Railway shall not be responsible any loss damage to contractor's men, materials, equipment's, and plants etc. from any cause whatsoever.
- 79.7 If any work (whether temporary or permanent) or other material, the value of which has been included in on account bills is destroyed or damaged or has/have for any other reasons to be replaced or restored by contractor, the value of the work or other materials destroyed may be recovered at any time from the contractor as debit due, provided always that no omission to deduct any amount due to the contractor and no payment made by the Railway to the contractor after the aforesaid amount become due and recoverable shall on any way prejudice or effect the right of the Railway to make such deductions at any time or otherwise to recover the amount as debit due.
- 79.8 No claim for extra payment shall be entertained on account of interruption to work on Railway account what so ever.
- 79.9 The work will have to be done in close Co-operation with the other departments/Agencies, if any.
- 79.10 The rates for Non-Schedule items occurring during the course of execution shall be payable after approval of the competent authority whose decision shall be final and binding on the contractor/s.
- 79.11 The plan and sites are subject to alterations to suit the local conditions as requirement of the Railway and the contractors will have no claim on account of the change in plan and sites etc.

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- 79.12 Any sum or sums of money due and payable to the contractor including the security deposit returnable to him under the contract may be with held or retained by way of lien by the Engineer against any claim of this or any other Railways or any other departments of the Central Government in respect of payment of a sum of money arising out of or under any this or any other railway or any other department of the Central Government.
- 79.13 For the day execution of the work if any clarification required by the contractor have to be obtained from the Engineer/his representative, Chief Engineer/Construction / Dy. Chief Engineer/Construction/North Central Railway/Allahabad in writing and their decision shall be final and binding on contractor / s.
- 79.14 In case of any dispute regarding Interpretation of any of the above quoted clauses, decision of the Chief Engineer Construction/North/North Central Railway, Allahabad will be final and binding of the contractor.

Dy. Chief Engineer/Const./Allahabad
For and on behalf of the President of India.

I / We agree to abide by the terms and conditions mentioned at page **1 to 86** in all as well as (i) North Central Railway General Conditions of Contract Regulations and Instructions for tenderer/s and standard form of Contract 2010 (ii) Indian Railways Unified Standard Schedule of Rates 2010 (iii) Indian Railways Unified Standard Specifications (Works & Material) 2010, Vol-I: Chapter 0 to 10 and Vol-II, Chapter 11 to 26 to the extent the later three books are applicable.

Signature of the contractor/s

Address

Signature of the Tenderer

**NORTH CENTRAL RAILWAY
OFFER FORM**

Tender Notice No.CEN/84/ALD/11/12-13

Dated: 31-01-2013

1	Name of work	Construction of Additional New Washing Line 24 length coaches including linking of track and other misc. work in Allahabad Yard.
2	Approximate cost	Rs.263.74 Lakh
3	Period of completion	12 months.
4	Earnest Money	Rs.2,81,880/-
5	Date of opening of tender	At 15.30 Hrs on 12-03-2013

GROUP 'A' (NON-SCHEDULE ITEMS)

S/N	Description of items	Total Cost as per the up dated rate calculated by the Railways.	
1	2	3	
1	All USSR-2010 items of Group 'A' + 16% above on Rs.20859518.06	Rs.24197040.95	
	All NS items of Group 'B' (P.Way items)	Rs.2176848.05	
	Total Say Rs.	Rs.26373889.00	
	Say	Rs.263.74 Lakh	
S. No	Description of item	Cost as per updated calculated Railway	Rate to be quoted by tenderer in percentage i.e. below/par/above of total cost calculated by the Railway.
1	2	3	4
			In figure In word
1	All USSR-2010 items of Group-A (S/No.1 to 118)	Rs.24197040.95	
2	All NS items of Group 'B' (NS-1 to 19) (P.Way items)	Rs.2176848.05	
	Total Rs.	Rs.26373889.00	

Note for guidance of tenderer:-

1. Tenderer should quote his single and common percentage rate in column '4' only above/below/at par, the Rly's estimated rates in column '2' on the basis of which Railway's estimated amount is worked out in column '3'.
2. Percentage rates to be quoted both in figures & words.
3. Only one common and single percentage should be quoted for each part.
4. It is certified that I/We have inspected the site of work and acquainted myself/ourselves with local conditions.
5. I/We have carefully gone through the specifications, special conditions etc. attached with the Tender Documents.
6. I/We undertake to keep on this offer valid for 90 days period as indicated in the tender form, from date of opening of tender and further not to revoke the same before the expiry of such period.

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USSR-2010 items Group-A

S/ No.	NS Item	Description of items	Qty	Unit	Rate	Amount
1	2	3	4	5	6	7
	011010	Earth work in excavation as per approved drawings and dumping at embankment site or spoil heap, within railway land, including 50m lead and 1.5m lift, the lead to be measured from the centre of gravity of excavation to centre of gravity of spoil heap: the lift to be measured from natural ground level and paid for in layers of 1.5m each, including incidental work, as per specifications-in.				
1	011011	All kinds of soils	4200	cum	85.54	359268.00
2	012010	Extra over item 011010 for excavation in foundations for buildings and bridges to cover dressing to neat dimension and plumbing sides etc. Note: Dressing under this item is payable for the total quantity of excavation in foundation and not partly.	200	cum	9.00	1800.00
3	012040	Filling, watering and ramming earth in 15 cm layers in floors and foundations with surplus earth from foundations including 50m lead and 1.5m lift	200	cum	19.20	3840.00
4	012050	Supplying and filling sand in plinth and under floors including watering, ramming, consolidating and dressing complete	30	cum	610.26	18307.80
5	013140	Removal of excavated/slip earth/ debris/ malba from the site of works to any other place outside Railway land/premises, including all excavations, handling, re-handling, loading, unloading and leading, etc. all labour and material as a complete job. Removal of Earth (all kinds of soils)/ROCKS, BOULDERS including mud/slush, slipped earth in catch water drains, side drains, over berms in cutting, water way of bridges, over coping of toe/breast/retaining walls etc. including crossing of nallah, railway tracks, making/repairing approach roads if required, all lead, lift, ascent, descents, or any other obstruction. Earth spoils to be dumped outside the cutting or railway embankments as per direction of Engineer in charge	4200	cum	114.99	482958.00
	031010	Providing and laying in position cement concrete of specified proportion excluding cost of cement, centering and shuttering - All works upto Plinth level :				
6	031013	1:4:8 (1 cement : 4 sand : 8 graded stone aggregate 40mm nominal size).	685	cum	1867.62	1279319.70
	031050	Providing and laying in position cement concrete of M 20 grade, excluding the cost of cement and of centering and shuttering, as per				

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		direction of the Engineer in charge :				
7	031051	All works upto Plinth level	1240	cum	1847.51	2290912.40
8	031052	All works above plinth level in retaining walls, walls (of any thickness) including attached pilasters, columns, pillars, posts, struts, buttresses, anchor blocks, parapets, copings, bed blocks, string or lacing courses, window sills, fillets, kerbs, steps etc.	2	cum	1967.43	3934.86
	031060	Centering and shuttering including strutting, propping etc. and removal of form work for :				
9	031062	Retaining walls, return walls, walls (any thickness) including attached plasters, buttresses, plinth and string courses fillets etc.	1400	Sqm	214.70	300580.00
10	031063	Columns, pillars, posts and struts & miscellaneous parts	10	Sqm	270.16	2701.60
	032050	Providing and laying cement concrete 1:2:4 in damp-proof course (1 cement : 2 sand : 4 graded stone aggregate 12.5mm nominal size - excluding the cost of cement and including providing, fixing and removal of forms.				
11	032053	50mm thick (20 mm coarse aggregate instead of 12.5mm)	35	Sqm	147.14	5149.90
12	032060	Extra for providing and mixing water proofing material of brand approved by railway, if not included in relevant item.	5	per 50 kg of cement	92.92	464.60
13	032070	Applying a coat of residual petroleum bitumen of penetration 80/ 100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	35	Sqm	136.19	4766.65
	033060	Supply and using cement at worksite :				
14	033063	PPC	981	Tonne	5520.00	5415120.00
	041010	Providing and laying in position M 20 Grade concrete for reinforced concrete structural elements but excluding cost of centering, shuttering, reinforcement and Admixtures in recommended proportion (as per IS:9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer in charge				
15	041011	All work upto plinth level, including raft foundation of washable aprons, HS tank, pile cap, footings of FOB, and Platform shelter etc.	362	cum	2100.13	760247.06
16	041012	All work in buildings above plinth level upto floor two level.	205	cum	2309.58	473463.90
17	041016	In arches, arch ribs, domes, vaults, shells, folded plates and roofs having slopes above 15°	2	cum	1977.52	3955.04
	042010	Centering and shuttering including strutting, propping etc. and removal of form for :				

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18	042011	Foundations, footings, bases of columns, raft foundation of washable aprons, Pile caps, Footings of FOB etc.	450	Sqm	127.80	57510.00
19	042012	Walls (any thickness) including attached plasters, buttresses, plinth and string courses etc.	450	Sqm	214.70	96615.00
20	042013	Suspended floors, roofs, landings, balconies, FOB slabs, walkway slabs and access platform	4	Sqm	213.09	852.36
21	042014	Lintels, beams, plinth beams, bed blocks, girders, bressumers and cantilevers	1300	Sqm	184.72	240136.00
22	042015	Columns, pillars, , posts and struts	980	Sqm	270.20	264796.00
23	042016	Stairs (excluding landings) except spiral-staircases	250	Sqm	247.30	61825.00
24	042025	Edges of slabs and beams in floors and walls under 20 cm wide	50	metre	73.60	3680.00
25	042026	Edges of slabs and beams in floors and walls above 20 cm wide	50	Sqm	344.60	17230.00
26	042040	Supplying and applying shuttering oil for mould releasing, having (Flash point 54 degree C and specific gravity 0.88±0.02) for concrete formwork to be applied either by brush or with spray machine to the entire satisfaction of Engineer Incharge	5240	Sqm	7.11	37256.40
	043010	Providing, hoisting and fixing in position upto floor two level M20 Grade precast RCC work including setting in cement mortar 1:3 (1 cement : 3 coarse sand) and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete including cost of centering, shuttering, finishing, Admixtures in recommended proportion (as per IS:9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability, excluding cost of cement and steel reinforcement, as per approved plan & direction of Engineer incharge.				
27	043015	In slabs for drain covers, manhole covers, flue tops etc.	1	cum	2695.23	2695.23
28	043020	Providing, hoisting and fixing in position M25 Grade Reinforced cement concrete in Precast standard Platform wall sections, including the cost of centering, shuttering, finishing, Admixtures in recommended proportion (as per IS 9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability but excluding the cost of cement and steel reinforcement, as per approved plan & as per direction of the Engineer incharge.	150	cum	2416.61	362491.50
	045010	Supplying Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				
29	045016	Thermo-Mechanically Treated bars	10400	Kg	54.35	565240.00

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30	046030	Add or deduct for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	50	metre	14.12	706.00
31	048100	Keeping holes for holding down bolts in foundation blocks or bed blocks	3200	Each	36.24	115968.00
32	048110	Grouting of holding down bolts with cement mortar in foundation blocks or bed blocks.	3200	Each	32.29	103328.00
	051010	Brick work with non-modular (FPS) bricks of class designation 7.5 in foundation and plinth in :				
33	051014	Cement mortar 1:4 (1 cement : 4 fine sand)	630	cum	2903.10	1828953.00
34	051015	Cement mortar 1:6 (1 cement : 6 fine sand)	20	cum	2837.41	56748.20
35	051017	Cement mortar 1:4 (1 cement : 4 coarse sand)	10	cum	2835.40	28354.00
36	051018	Cement mortar 1:6 (1 cement : 6 coarse sand)	300	cum	2835.40	850620.00
	051030	Brick work with machine moulded perforated bricks of class designation 12.5 conforming to IS: 2222 -1991 in superstructure from beyond plinth level upto 6m above plinth level in cement mortar 1:6 (1 cement : 6 coarse sand)				
37	051031	With non-modular (FPS) bricks	50	cum	3525.78	176289.00
38	051040	Extra over item 051010 & 051020 for brick work in superstructure beyond plinth level upto floor two level :	10	cum	141.73	1417.30
	072030	Providing and fixing paneling and/or glazing in panelled and/or glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling/glazing for panelled/ glazed or panelled and glazed shutters 25mm to 40mm thick				
39	072037	Glazing with float glass panes 4mm thick (10kg/sqm)	24	Sqm	290.58	6973.92
	072150	Providing and fixing flush door shutters to IS: 2202 Part-I non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3ply veneering with vertical grains or cross bands and face veneers on both faces of shutters				
40	072151	35mm thick including ISI marked stainless steel butt hinges with necessary screws	26	Sqm	1104.45	28715.70
	074260	Providing and fixing fly proof galvanized M.S. wire gauge to windows and clerestory windows using galvanized M.S. wire gauge with average width of aperture 1.4mm in both directions with wire of dia 0.63mm				
41	074261	With 2nd class teak wood beading 50x20mm	15	Sqm	542.40	8136.00
	075010	Providing and fixing M.S. pressed butt hinges generally conforming to IS:1341, bright satin finish with necessary screws etc. complete of size				
42	075011	125x65x2.12 mm	48	Each	29.88	1434.24

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	075050	Providing and fixing M.S. sliding door bolts generally conforming to IS: 281, bright satin finish or black stone enamelled with nuts and screws etc. complete of size				
43	075052	250x16 mm	12	Each	93.33	1119.96
	075060	Providing and fixing M.S. tower bolts generally conforming to IS:204 (Part I) with necessary screws etc. complete of size.				
44	075061	250x10 mm	24	Each	43.03	1032.72
	075070	Providing and fixing M.S. door handles with necessary screws etc. complete.				
35	075072	100mm	24	Each	15.58	373.92
	081010	Structural steel work in single section including cutting, bending, straightening, drilling, rivetting, bolting, hoisting, fixing in position, including applying a priming coat of approved steel primer, complete - upto 6m height above GL				
46	081011	In RSJ, tees, angles and channels	1200	Kg	52.67	63204.00
	081030	Structural steel work welded in built up sections, trusses and framed work, girders, stagings, racks, etc including cutting, bending, straightening, hoisting, fixing in position, including applying a priming coat of approved steel primer, complete - upto 6m height above GL				
47	081031	In RSJ, tees, angles and channels	1200	Kg	69.24	83088.00
48	081032	In flats, plates, round or square bars	100	Kg	68.00	6800.00
49	081100	Providing and fixing MS round or square bars/flats or grills in frames in window and clerestory windows	25	Sqm	55.97	1399.25
50	081140	Supplying and fixing lewis/ holding down bolts of approved design with nuts and washers complete	1400	Kg	61.13	85582.00
	081210	Supplying and fixing rolling shutters of approved make as per IS 6248, made of required size M.S. laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete including the cost of providing and fixing necessary 27.5cm long wire spring grade No.2 and M.S. top cover of required thickness for rolling shutters				
51	081213	80x0.90mm M.S. laths with 0.90mm thick top cover	20	Sqm	1251.90	25038.00
52	081220	Providing and fixing ball bearing for rolling shutters	4	Each	422.23	1688.92
	081250	Providing and fixing ISI standard steel glazed doors, windows and ventilators of standard rolled steel sections (shutters & frame), joints mitered and welded with 15x3mm lugs, 10cm				

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		long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1cement: 3coarse sand: 6graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including providing and fixing glass panes with glazing clips and special metal sash putty of approved make, necessary fittings such as brass handles, brass peg stays, brass spring catch, bolts, hinges, locks etc as required, applying a priming coat of approved steel primer but excluding the cost of metal beading				
53	081253	Windows-side hung	25	Sqm	2390.66	59766.50
54	081350	Providing and fixing circular/ hexagonal M.S. sheet ceiling fan box with clamps of internal dia 140mm, 73mm height, 3mm thick rim, top and bottom lid of 1.5mm M.S. sheet. Lids shall be screws into M.S. box by means of 3mm round beaded screws, clamps shall be made of 12mm dia M.S. bar bent to shape as per standard drawing with over all length as 80cm. (it includes cost of clamps also)	10	Each	112.97	1129.70
55	081400	6mm welding by electric plant including transportation of electric welding plant at site etc. complete	5000	cm	4.99	24950.00
	092010	Cement concrete flooring 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete				
56	092011	25mm thick with 12.5mm nominal size stone aggregate	300	Sqm	89.80	26940.00
57	092012	40mm thick with 20mm nominal size stone aggregate	450	Sqm	113.50	51075.00
58	092013	50mm thick with 20mm nominal size stone aggregate	1460	Sqm	132.48	193420.80
	092020	Cement plaster skirting (upto 30cm height) with cement mortar 1:3 (1cement: 3coarse sand) finished with a floating coat of neat cement				
59	092021	15mm thick	30	Sqm	102.63	3078.90
60	092040	Extra over for making chequers of approved pattern on cement concrete floors, steps, landing, pavements etc.	1235	Sqm	15.58	19241.30
	094040	Precast Chequered factory made terrazzo tiles 22mm thick/ with graded marble chips size upto 6mm in floors jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing of cement slurry complete on 20mm thick bed of cement mortar 1:4 (1cement : 4Coarse sand)				
61	094043	With white cement with pigment	1070	Sqm	824.22	881915.40

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	095010	Providing and fixing Ist quality ceramic tiles conforming to Group B-III (Ceramic Wall Tiles) of IS:15622 of manufacturers approved by railway in all colours, shades, and design as approved by the Engineer-in-Charge in skirting, risers of steps and dado over 12mm thick bed of cement mortar 1:3 (1cement: 3coarse sand) including pointing in white cement mixed with pigment of matching shade complete				
62	095012	200x300 mm	35	Sqm	610.90	21381.50
	095020	Providing and fixing ceramic tiles conforming to IS:15622 of manufacturers approved by railway in all colours, shades, design and abrasion resistance class as approved by the Engineer-in-Charge in floors and landings over 20mm thick bed of cement mortar 1:4 (1cement: 3coarse sand) including pointing in white cement mixed with pigment of matching shade complete				
63	095021	Of Group B-II Clause 5.1 (for abrasion resistance) of IS:15622 (Ceramic Floor Tiles) of size 300x300mm	10	Sqm	634.27	6342.70
	108160	Providing and fixing on wall face unplasticised - Rigid PVC single socketed rain water pipes conforming to IS: 13592 Type A including jointing with seal ring conforming to IS: 5382 leaving 10mm gap for thermal expansion.				
64	108162	110mm dia.	35	metre	196.24	6868.40
	108170	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised- Rigid PVC rain water pipes conforming to IS: 13592 Type A including jointing with seal ring conforming to IS: 5382 leaving 10mm gap for thermal expansion.				
65	108174	Single Pushfit Coupler, 110mm	10	Each	182.96	1829.60
	108180	Providing and fixing on wall face unplasticised - PVC moulded bend and shoe for unplasticised- Rigid PVC rain water pipes conforming to IS: 13592 Type A including jointing with seal ring conforming to IS: 5382 leaving 10mm gap for thermal expansion				
66	108182	Bend 87.5o, 110mm dia bend	10	Each	170.18	1701.80
67	108184	Shoe (Plain), 110mm dia shoe	10	Each	160.89	1608.90
	108190	Providing and fixing unplasticised- PVC pipe clips of approved design to unplasticised- PVC rain water pipes by means of 50x50x50mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1cement: 4coarse sand) and making good the wall etc. complete				
68	108192	110mm	30	Each	104.82	3144.60

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69	109220	Providing and applying water proofing treatment to RCC roof slab etc. by application of two coats of cement slurry mixed with water proofing compound (Acrylic based polymer, solid content 30% \pm 3, pH >7) in the ratio of 1:2 (1 part of water proofing compound : 2 parts of cement by weight), followed by two coats of single component moisture cured polyurethane based elastomeric water proofing coating conforming to ASTM C-836-89 having tensile strength 3.1 N/mm ² . Topping layer of 25 mm thick cement concrete 1:2:4 (to be paid separately) to be laid	300	Sqm	715.48	214644
	111010	12 mm cement plaster of mix -				
70	111011	1:4 (1cement: 4 fine sand)	200	Sqm	62.37	12474
71	111012	1:6 (1cement: 6fine sand)	800	Sqm	62.37	49896
	111020	15 mm cement plaster on the rough side of single or half brick wall of mix -				
72	111021	1:4 (1cement: 4 fine sand)	1800	Sqm	71.82	129276
73	111022	1:6 (1cement: 6 fine sand)	230	Sqm	71.82	16518.60
	111150	Cement plaster to ceiling of mix -				
74	111151	6 mm thick 1:3 (1cement: 3 fine sand)	400	Sqm	53.72	21488
75	111152	12 mm thick 1:3 (1cement: 3 fine sand)	0	Sqm	65.68	0
76	111180	Neat cement punning	1200	Sqm	13.01	15612
	115040	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade				
77	115041	New work (two or more coats of distemper) over and including priming coat with cement primer	800	Sqm	55.62	44496
78	115110	Finishing walls with water proofing cement paint of required shade two or more coats on new work applied @ 3.84 Kg/10 sqm	1000	Sqm	33.36	33360
79	115160	Finishing walls with Acrylic Smooth exterior paint with Silicone additives of required shade on new work (Two or more coats applied @ 1.67ltr/10 sqm over and including one coat of water proofing cement paint applied @ 2.20 kg/10sqm	1000	Sqm	74.31	74310
	121010	Applying Priming Coat :				
80	121011	With ready mixed pink or grey primer of approved brand and manufacture on woodwork (hard and soft wood)	100	Sqm	21.40	2140
81	121013	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanized iron/steel works	100	Sqm	17.31	1731
	121060	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade				
82	121061	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	400	Sqm	66.08	26432

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83	121140	Painting (one or more coats) with black Japan paint of approved brand and manufacture to give an even shade	50	Sqm	22.27	1114
	131130	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Internal work – Exposed on wall				
84	131133	25 mm dia. nominal bore	215	metre	228.21	49065
	131140	Providing and fixing medium grade G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the wall etc. Concealed pipe including painting with anti corrosive bitumestic paint, cutting chase and making good the wall				
85	131141	15 mm dia. nominal bore	150	metre	176.63	26495
86	131143	25 mm dia. nominal bore	50	metre	260.78	13039
	131150	Providing and fixing medium grade G.I. pipes complete with G.I. fittings including trenching and refilling etc. External Work				
87	131151	15 mm dia. nominal bore	20	metre	129.27	2585
88	131153	25 mm dia. nominal bore	50	metre	216.41	10821
89	131155	40 mm dia. nominal bore	20	metre	307.53	6151
90	131158	80 mm dia. Nominal bore	0	metre	631.95	0
91	131159	100 mm dia. nominal bore	1340	metre	858.10	1149854.00
	131160	Making connection of medium grade G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete				
92	131163	100 mm to 150 mm dia.	4	Each	1147.40	4589.60
	132010	Providing and fixing brass bib cock of approved quality				
93	132011	15 mm nominal bore	10	Each	230.05	2301
	132020	Providing and fixing brass stop cock of approved quality				
94	132021	15 mm nominal bore	6	Each	227.38	1364
	132030	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)				
95	132031	25 mm nominal bore	4	Each	582.49	2330
96	132033	40 mm nominal bore	1	Each	1163.32	1163
	132140	Providing and fixing unplasticised PVC connection pipe with brass unions: 45 cm length				
97	132141	15 mm nominal bore	6	Each	60.65	364
	133200	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. 100 mm dia (the tail pieces if required will be paid separately)				
98	133201	Class I	1	Each	4342.50	4342.50
99	135010	Providing and fixing cast iron water hydrant one way for carriage washing lines including cost of jointing material complete as per approved drawing {Drg No. 8373/M.(NR) used for analysis}	100	Each	1416.51	141651.00

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100	136020	Constructing masonry Chamber 60x60x75 cm, inside with 7.5 class designation brick work with FPS Bricks in cement mortar 1:4 (1 cement :4 coarse sand) for sluice valve, with C.I. surface box 100mm. top diameter and 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement :5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement :3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design	1	Each	3139.09	3139.09
	142010	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes including bends etc with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1cement: 2fine sand) including testing of joints etc. complete upto 800mm dia.				
101	142011	100mm dia. R.C.C. pipe	150	metre	247.42	37113.00
102	142012	150mm dia. R.C.C. pipe	750	metre	295.19	221392.50
	143010	Constructing brick masonry manhole in cement mortar 1:4 (1cement: 4coarse sand) R.C.C. top slab with 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size), foundation concrete 1:4:8 mix (1cement: 4coarse sand: 8graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1cement: 3coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design				
103	143013	Inside size 120x90cm and 90cm deep including C.I. cover with frame (medium duty) 500mm internal diameter, total weight of cover and frame to be not less than 116kg (weight of cover 58kg and weight of frame 58kg). With F.P.S. bricks class designation 7.5	30	Each	11284.56	338536.80
	143040	Extra for depth for manholes of size				
104	143043	Size 120x90cm With F.P.S Bricks class designation 7.5	40	metre	3662.36	146494.40

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	143170	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) cement plastered on both sides with cement mortar 1:3 (1cement: 3coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete				
105	143171	For pipes 100 to 230mm diameter	2	Each	159.81	319.62
	143210	Constructing brick masonry road gully chamber 50x45x60cm with bricks of class designation 7.5 in cement mortar 1:4 (1cement: 4 Coarse Sand) including 500x450mm precast R.C.C. horizontal grating with frame complete as per standard design				
106	143211	With F.P.S. bricks	25	Each	2293.15	57328.75
	141010	Providing, laying and jointing glazed stoneware pipes grade 'A' as per IS:651 including bends etc. with stiff mixture of cement mortar in the proportion of 1:1 (1cement : 1fine sand) including testing of joints etc. complete				
107	141012	150mm diameter	100	metre	230.25	23025
	141040	Providing and laying cement concrete 1:5:10 (1cement: 5coarse sand: 10graded stone aggregate 40mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design				
108	141042	150mm diameter S.W. pipe	100	metre	212.25	21225
	141050	Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300x300mm size (inside) the weight of cover to be not less than 4.50kg and frame to be not less than 2.70kg as per standard design				
109	141053	150x100mm size P type With F.P.S. bricks class designation 75	4	Each	1299.79	5199
	151010	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast iron P or S trap, 10litre low level white P.V.C. flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and f				
110	151011	White Vitreous China Orissa pattern W.C. pan of size 580x440-mm with integral type foot rests	2	Each	3313.12	6626
	151070	Providing and fixing wash basin with C.I./ M.S. brackets, 15mm C.P. brass pillar taps, 32mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required				

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111	151073	white vitreous china wash basin size 550x400mm with a pair of 15mm C.P. brass pillar taps	2	Each	1898.79	3798
112	153410	Providing and fixing Towel rail (C.P.)brass15 mm dia x 600 mm long having approx. wt.500 gm	2	Each	344.97	690
113	153420	Providing and fixing C P brass Towel ring in trapezoidal shape having length of 215 mm, width 200 mm, minimum distance from wall 37 mm with concealed fittings arrangements weighing approx. 90 gms	2	Each	272.21	544
114	153460	Providing and fixing C P brass Swivelling shower 15 mm nominal size, 95 mm long, 60 mm dia. & having approx. wt. of 45 gms with approx. 90 holes of 1.2 mm dia.	2	Each	143.04	286
115	153630	Providing and fixing S.C.I. trap with 10 cm inlet and 10 cm outlet of self cleansing design with S.C.I. screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors	2	Each	425.92	852
116	171690	Providing & applying Pre-Construction Anti-Termite treatment to proposed structure, with application of Imidacloprid 30.5% SC @ 0.075% concentration mixed with water in ratio of 1:475, as per detailed specifications given in Indian Railways Standard Specifications, so as to create a chemical barrier below and around the structure by an approved agency. (Plinth Area/Basement floor area shall be considered for Payment)	300	Sqm	80.56	24168
	181020	Demolishing plain cement concrete including disposal of material within 50m lead				
117	181021	1:2:4 or richer mix with max. 20 mm coarse aggregate	10	cum	434.88	4348.80
118	181030	Demolishing R.C.C. work including cutting and stacking of steel bars and disposal of unserviceable material within 50m lead. (Extra payment for scraping, cleaning and straightening of bars to be made separately)	10	cum	634.43	6344.30
		Add 16% above on all chapter = 20859518.06 = 3337522.89				24197040.95

GROUP-B NS (P.Way Items)

S/No.	NS No.	Description	Qty.	Unit	Rate	Amount
119	NS-1	Dismantling and Removing of Existing BG track of any classification including hauling of materials track crossing loading unloading transporting and the materials such as rails metal/wooden sleepers and fittings etc to Rly's depot as per direction of Engineer-in-charge with contractor's tools and plants etc.	750	Meter	97	72750

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120	NS-2	Dismantling of old turnouts and trap points laid on wooden/ST/PSC sleepers under traffic block/speed restriction including leading and stacking dismantled material from site to nominated store as a complete job this work also include linking of normal track in place of dismantled turnout in the same traffic block with 60/52kg rails/PSC sleepers.				
		1in 81/2 Touts	1	Set	34575	34575
121	NS-3	Supplying and stacking of track ballast as per railway specification including preparation of plots with contractors labour tools and plants as per site requirement and direction of site engineer in charge.	650	Cum	1348	876200
122	NS-4	(i) Leading out of ballast and putting in track from stacks along the track (ballast stacks within max radius of 1000 m) including crossing of tracks nallah roads etc. the rates include all lead lift T&P as required for carrying out complete work. Contractor will be responsible for personel safty of his labour animals etc.	650	Cum	127	82550
123	NS-5	Linking of BG track with 52/60 kg rails and PSC sleepers after spreading, laying, squaring, sleeper density M+4 to M+7 including shifting pairing of Free/Long welded panels up to block section length lying along the track or in yards within 1000 m radius	250	Meter	301	75250
124	NS-6	Linking of BG T/outs and Traps on PSC sleepers on main line, loop line under traffic block/speed restriction and removal of track during same block with cutting of rails (not end cropping) after spreading laying squaring on already spread ballast including leading of switches crossings fittings sleepers rails complete in all respect.				
		(ii) 1in 81/2 T/outs	1	Set	37617	37617
125	NS-7	Cutting/end cropping of released rails 52/60 kg rails for using on loop lines with contractors black smith helpers machine hacksaw blades for making vertical cut.	20	Per cut	108	2160
126	NS-8	Providing and fixing of fouling marks for newly linked points and xings in yards. The contractor including will arrange all consumable materials fixing with all lead lift xing the tracks labour T&P etc for completing the job in accordance with IRPWM.	2	Each	3182	6364
127	NS-9	Fabrication & fixing of dead end as per RDSO drawing including painting of sleeper with contractors red paint fixing with longer size bolts rails and sleeper will be available in respective yards as a complete job.	2	Each	8760	17520

Signature of the Tenderer

128	NS-10	Dismantling & removal of existing dead end/Sanded dead end from the existing track including leveling of bed up to formation level loading leading and stacking of dismantled material from the site of work to the store at nominated place in respective yard	1	Each	6021	6021
129	NS-11	(i) Painting of 52/60kg rails inside, outside track on rail bottom, web, foot and fishing plane as per requirement with Red oxide/Zinc chromate primer to IS: 2074 of Burger/Nerolac/Asian make or any equivalent make, including surface preparation i.e. cleaning etc. including all labour & material etc.	585	Sqm	25	14625
		(ii) Painting One coat of bituminous solution to IS:158 Bituminous Emulsion to IRS-P- 301996 , inside, outside track on rail bottom, web, foot and fishing plane as per requirement as per the directions of engineer in charge including all labour & material etc.	585	Sqm	29.9	17491.5
130	NS-12	Complete item rate for stacking of released rails and sleepers within 500 meter of site of work after proper classification as per IRPWM (corrected up to date) and as directed by the site incharge. Separate stack will be made for SH & US material at the site as instructed with all lead, lift, handling of material, crossing of yard, drain, level crossing etc. Nothing extra will be paid to contractor except the accepted rates whatsoever the case may be.				
		(a) For 90R / 52 kg rails	1500	Metre	13	19500
		(b) For Wooden, ST sleepers or CST-9 etc.	1500	Each	16	24000
131	NS-13	Extra action for siezed pandrol clip from the track without damage PRC sleepers with /without the help of gas heating and cleaning the same with wire brush and emery paper specially on the centre leg including cleaning of eyes of MCI inserts from any debries of rusted material and insertion of railways new/ same pendrol clips with application of zero grade graphite greece conforming to IS 408:1981 with all contractor's labour, tools and plants, lead and lift etc. complete job including consumables.	500	Each	13.99	6995
132	NS-14	Slewing of track 52/60 kg with PSC sleepers to required alignment with maximum shift 75 cm on curve /straight track including shifting of ballast making required LWR plain track ballast profile including packing and making 20 kmph maintaining alignment longitudinal and cross level with contractor labour and T&P.	100	Metre	220	22000
133	NS-15	Loading leading unloading and stacking of railway P.way materials i.e. rails, switches, sleepers and fittings etc. from CSP/ALD, TD/SFG to required location with contractors trucks trailers labourers crane T&P etc.				0
		(a) More than 1.0 to 5.0 Km	50	MT	560	28000

Signature of the Tenderer

		(b) More than 5.0 to 15.0 Km	10	MT	577	5770
		(c) More than 15.0 to 35.0 Km	60	MT	586	35160
134	NS-16	Supplying and fixing grip expansion bolts, nuts, washers etc. of size 20 mm dia 180 mm long in CC/RCC lead block to hold the rails. The bolts should be galvanized. The rate will be for all L&M including the cost of drilling lubes grinders etc. for drilling T&P used in operation etc. complete including unloading, loading lifting etc. complete. Nothing extra will be paid to effect the item whatsoever in the case.	3000	Each	164	492000
135	NS-17	Manufacturing, S&F MS cleats with expansion bolts of size 65 x 65 x 40 mm. the rate will be inclusive of all machining, shaping, drilling for holes in cleats inclusion loading, unloading, leading lifting etc. complete nothing extra will be paid to affect this item whatsoever is the case.	3000	Each	76	228000
136	NS-18	Fixing of MS bearing plate T-2595 under rail over washing pit at correct alignment and position by grip expansion. Bolt instead of fixing of grit as provide in relevant NS items.	1500	Each	9	13500
137	NS-19	Laying of track on washing line with contractor's labour, tolls and plants etc. including handling of rails for all leads and lift and fixing of fastening as a complete job.	600	Metre	98	58800
		Total of Group-B				2176848.5

Notes:

The tenderer/s is/are required to submit all the required documents including the credentials along with their offer. Tenderer/s may please note that no separate correspondence will be made in this regard.

I/We clearly understand that I/We/am/are not entitled to any other payment on any account what so ever, except the tendered rates for fully complete job.

Signature of the Tenderer/s

Address: _____

Signature of the Tenderer

SUPPLEMENTARY AGREEMENT

ARTICLES of Agreement made this in the year two thousand between the President of India, acting through the “Chief Engineer/Con., Dy Chief Engineer/Construction, North Central Railway, Administration having his office at Allahabad herein after called the Railway of the one part and Shri/M/s Of the second part.

WHERE AS the party hereto of the other part executed an agreement with the party hereto of the first part being agreement No./Work order No. dated..... for he one performance of..... herein after called the ‘PRINCIPAL AGREEMENT’.

AND WHERE AS it was agreed by and between the parties hereto that the works would be completed by the party hereto of the second part on date last extended and where as the party hereto of the second part has executed the works to the entire satisfaction of the party hereto of the first part.

AND WHERE AS the party hereto of the first part already made payments of the party hereto of the second part diverse sums from time to time aggregating to Rs. including the final bill bearing voucher No Dated (the receipt of which is hereby acknowledged by the party hereto of the second part in full and final settlement of all his/its claims under the Principal Agreement.

AND WHERE AS the party hereto of the second part have received further sum of Rs Through the final bill bearing voucher No..... dt (the receipt of which is hereby acknowledged by the party thereto of the second part) from the party hereto of the first part in full and final settlement of all his/its disputed claims under Principal Agreement.

Now, it is hereby agreed by an between the parties in the consideration of sums already paid (by the party) hereto of the first part to the party hereto of the second part against all outstanding dues and claims for, all work done under the aforesaid Principal Agreement including/excluding the security deposit, the party hereto of the second part have no further dues or claims against the party hereto of the first part under the said Principal agreement.

It is further agreed by and between the parties that the party hereto of the second part has accepted the said sums mentioned above in full and final satisfaction of all its dues and claims under the said Principal Agreement.

It is further agreed and understood by between the parties that in consideration of the payment already made, under the agreement, the said Principal Agreement shall stand finally discharged and rescinded all the terms and conditions including the arbitration clause.

It is further agreed and understood by and between the parties that in consideration of the payment already made, under the agreement, said Principal Agreement shall stand finally discharged and rescinded all the terms and conditions including the arbitration clause.

It is further agreed and under stood by and between the parties that the arbitration clause contained in the said Principal Agreement shall cease to have any effect and/or shall be deemed to be non-existent for all purposes.

For and on behalf the President of India.

Signature of contractor/s
Witness of the Signature

1. _____

2. _____

Witness

Signature of the Tenderer

PROFORMA**DECLARATION**

I/We hereby solemnly declare that I/We visited the site of the work (as on top sheet) and have made myself/ourselves fully conversant of the conditions therein and in particular the following: -

- 1 Topography of area.
- 2 Soil strain at site of work.
- 3 Sources and availability of construction materials.
- 4 Rates for construction of material, water, electricity including all local taxes, royalties, octroi etc.
- 5 Availability of local labour (both skilled and unskilled) and relevant labour rates and labour laws.
- 6 The existing roads and approaches to the site of work and requirements for further services roads/approaches to be constructed by me / us.
- 7 The availability and rates of private land etc. that shall be required by me / us for various purposes.
- 8 Climatic conditions and availability of working days.

I/We have quoted my/our rates for various items in the schedule of items, quantities and rates taking into account all the above factors also.

Signature of the Tenderer

CONSTITUTION OF FIRM

- 1** Full name of contractor/Construction firm and year of establishment.
- 2** Registered Head Office and address.
- 3** Branch office in India.
- 4** Constitution of firm, give full details including name of partners / executives / Power of Attorney / holders etc.
- 5** Particulars of registrations with Government / Semi – Government Organization, Public sector undertakings & local bodies etc.
- 6** Payments received during last 3 (Three) years (Years-wise)

Signature of the Tenderer

STATEMENT OF WORKS EXECUTED/COMPLETED BY CONTRACTOR/S

S.N.	Name of work	Name of deptt. where worked	Address & fax. no. of the deptt.	Value of work done	Value of dept. material supplied if any	Date of award of work	Completion period	Date of completion of work	Whether delay due to contractor	Remarks/details of certificate attached
1	2	3	4	5	6	7	8	9	10	11

Signature of the Tenderer

Annexure - E

STATEMENT OF WORKS BEING EXECUTED/IN HAND BY THE CONTRACTOR/S

S/ No.	Name & place of work	Authority/ Agency for whom the work is being carried out	Date of Award & Agreement No. and date.	Date of completi on	Agreement al Cost work/ likely cost.	Payment taken/ drawn	Principal/ technical features of work in brief.	S/No. at which relevant certificate/ docu ments are attached.
1	2	3	4	5	6	7	8	9.

Signature of the Tenderer

STATEMENT OF TURNOVER IN EXECUTING ALL TYPE OF CIVIL ENGG. WORKS

S. N.	Name of work	Name of client	Address & fax no. of client	Value of work done		
				2009-10	2010-11	2011-12
1	2	3	4	5	6	7

Signature of the Tenderer

Statement of equipment

S. No.	Type of equipment required for the work	No. of Units of equipment required for the work	Details of equipment				Available for work			Remarks if any
			Make	Distinguishing number (Chasis No.)	Capacity/Size	Year of manufacture	Present condition	Present location	Owned or leased	

Signature of the Tenderer

Name of the Bank _____

Bank Guarantee No. _____ Dated _____

President of India, Acting through _____ Designation and Address
of contract signing authority

PERFORMANCE SECURITY BANK GUARANTEE BOND

1. In consideration of the President of India acting through (Designation & address of Contract Signing Authority), North Central Railway, Allahabad (hereinafter called "The Government") having agreed under the terms and conditions of agreement/Contract Acceptance letter No. _____ Dated: _____ made between _____ (Designation & address of contract signing Authority) and _____ (hereinafter called "the said contractor (s)" for the work _____ (hereinafter called "the said agreement") having agreed for submission of a irrevocable Bank Guarantee for Rs. _____ (Rs. _____ only) as a performance security Bank Guarantee Bond from the contractor (s) for compliance of his obligations in accordance with the terms of conditions in the said agreement.

2. We _____ (indicate the name of the Bank) hereinafter referred to as the Bank, undertake to pay to the Government an amount not exceeding Rs. _____ (Rs. _____ only) on demand by the Government.

We _____ (indicate the name of the bank) further agree that (and promise) to pay the amounts due and payable under this guarantee without any demur merely on a demand from the Government through the FA & CAO/Const., North Central Railway, Allahabad/_____ Designation and address of contract signing authority), North Central Railway/Const./Allahabad, stating that the amount claimed is due by way of loss or damage caused to or would be caused or suffered by the Government by reason of any breach by the said contractor of any of the terms or conditions in the said agreement or by reason. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ (Rs. _____ only).

3. (a) We, the said Bank further undertake to pay to the government any money so demanded notwithstanding any dispute or dispute raised by the contractor (s) in any suit or proceeding pending before any court or Tribunal relating to liability under this present being absolute and unequivocal.

Signature of the Tenderer

(b) The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor (s) shall have no claim against us for making such payment.

4. We _____ (indicate the name of bank) to further agree that the guarantee herewith contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or till discharged by _____ (Designation & address of contract signing authority) on behalf of the Government certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor (s) and accordingly discharges this guarantee.

Unless a demand or claim under this guarantee is made on us in writing on or before (2 months after the date of completion of the contract), we shall be discharged from all liabilities under this guarantee thereafter.

5. (a) Notwithstanding anything to the contrary contained herein the liability of the bank under this guarantee will remain in force and effect until such time as this guarantee is discharged in writing by the Government or until (Date of completion) whichever is earlier and no claim shall be valid under this guarantee unless notice in writing thereof is given by the Government within 2 months from the date aforesaid.

(b) Provided always that we _____ (indicate the name of the Bank) unconditionally undertakes to renew this guarantee or to extend the period of guarantee from year to year within two months before the expiry of the period or the extended period of the guarantee, as the case may be, on being called upon to do so by the Government. If the guarantee is not renewed or the period extended on demand, we _____ (indicate the name of the Bank) shall pay the Government the full amount of the guarantee on demand and without demur.

6. We, _____ (indicate the name of the Bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without effecting in any manner out of obligations hereunder to vary any of the terms and conditions of the said contract from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor (s) and to forbear or enforce any of the terms and conditions of the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor (s) or for any bearing, act or omission on the part of the government or any indulgence by the Government to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties but for the said reservation would relieve us from the liability.

Signature of the Tenderer

7. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor (s).

8. We _____ (indicate the name of the Bank) lastly undertake not to revoke this Guarantee except with the previous consent of the Government in writing.

Dated _____ the _____ day to _____ for _____ (indicate the name of bank).

Signature of Bank Authorise official

(Name)

Designation:

Full Address:

Witness

- 1. _____
- 2. _____

Signature of the Tenderer

TENDER NOTICE NO. CEN/84/ALD/11/12-13

Dy Chief Engineer/Const./NCR, Allahabad for and on behalf of the President of India, invites sealed open tenders on the prescribed form for the under noted works:

SN.	Tender No.	Name of work	Cost of work	Earnest Money	Completi on period	Cost of tender form	Date of opening
1.	11/12-13	Construction of Additional New Washing Line 24 length coaches including linking of track and other misc. work in Allahabad Yard.	Rs.263.74 Lakh	Rs.2,81,880/-	12 Months	Rs.10,000/- + 7% UPTT	12-03-2013

Tenderers as individual or partnership firm or company fulfilling following minimum eligibility criteria shall only be considered eligible for award of work:

- i) The tenderer should have completed successfully at least one work of similar nature for a minimum value of 35% of advertised cost of work in last three financial years and up to date of opening of tender in current year. The similar work is defined as “**Any Civil Engineering Work**”
- ii) The tenderer should have received total contract amount during last three financial years and up to date of opening of tender in the current year as per latest audited books of accounts of a minimum value of 150% of advertised cost of work.

Tender forms shall be available on sale in the office of Dy Chief Engineer (Const.)/NCR Allahabad, Dy Chief Engineer (Const) NCR Jhansi and Chief Project Manager, IRPMU, Shivaji Bridge, New Delhi w.e.f 15 days prior to date of opening. For further details please visit our website www.ncr.indianrailways.gov.in. or www.tenders.gov.in. In regards to eligibility criteria Tenderers are required to submit documents in support of minimum eligibility criteria alongwith the tender as the same shall not be accepted/entertained after opening of tender.

Dated: 31-01-2013

**DY Chief Engineer/Const.
NC Railway, Allahabad**

Signature of the Tenderer

निविदा-सूचना सं०. CEN/84/ALD/11/12-13

उप मुख्य अभियन्ता/निर्माण/उत्तर मध्य रेलवे, इलाहाबाद के द्वारा भारत के राष्ट्रपति के लिये एवं उनकी ओर से निम्नलिखित कार्यों के लिये मुहरबन्द खुली निविदायें निर्धारित प्रपत्र पर आमन्त्रित की जाती हैं:

क्रम सं०.	निविदा सं०	कार्य का नाम	कार्य की अनुमानित लागत	धरोहर राशि	कार्य पूर्ण करने की अवधि	निविदा प्रपत्र मूल्य	निविदा खुलने की तिथि
1.	11/12-13	इलाहाबाद यार्ड में अतिरिक्त धुलाई लाइन (24 यान लम्बाई) का निर्माण, ट्रैक जड़ाई एवं अन्य कार्य हेतु।	रू.263.74 लाख	रू.2,81,880/-	12 माह	रू.10000/- +7प्रतिशत यू.पी.टी.	12-03-2013

2.1 कार्य स्वीकृति हेतु केवल उन्हीं निविदाकर्ताओं अथवा पार्टनरशिप फर्म अथवा कम्पनी की निविदा मान्य समझी जायेगी जो कि कम से कम निम्नलिखित मानक को पूर्ण करेंगे ।

- 1) निविदाकर्ता द्वारा चालू वर्ष में निविदा खुलने की तिथि तक तथा विगत 3 वित्तीय वर्षों में कम से कम निविदा विज्ञप्ति लागत का 35 प्रतिशत के लागत का के कार्य को सफलता पूर्वक पूर्ण किया गया होना चाहिये। सिमिलर नेचर कार्य का विवरण निम्नलिखित है:-
'कोई भी सिविल इंजीनियरिंग का कार्य'
- 11) आडिट बुक आफ एकाउन्ट के अनुसार निविदा दाता द्वारा चालू वर्ष में निविदा खुलने की तिथि तक तथा विगत 3 वित्तीय वर्षों में निविदा विज्ञप्ति कार्य लागत के कम से कम 150 प्रतिशत लागत का भुगतान प्राप्त किया होना चाहिये ।

बिक्री हेतु निविदा प्रपत्र, निविदा खुलने के 15 दिन पूर्व से उप मुख्य अभियन्ता/निर्माण/उत्तर मध्य रेलवे, इलाहाबाद, झांसी एवं चीफ प्रोजेक्ट मैनेजर/आई.आर.पी.एम.यू. के कार्यालय शिवाजी ब्रिज, नई दिल्ली के कार्यालय में उपलब्ध होंगी। योग्यता मानक तथा अन्य जानकारियों हेतु हमारी वेब साइट **www.ncr.indianrailways.gov.in** अथवा **www.tenders.gov.in** पर सम्पर्क करें। निविदाकर्ता को न्यूनतम योग्यता मानक प्रपत्र इत्यादि निविदा के साथ ही संलग्न करने होंगे, निविदा खुलने के बाद योग्यता मानक प्रपत्र इत्यादि स्वीकार नहीं किये जायेंगे।

दिनांक: 31-01-2013

उप मुख्य अभियन्ता/निर्माण
उत्तर मध्य रेलवे, इलाहाबाद।

Signature of the Tenderer

TENDER NOTICE NO. CEN/84/ALD/11/12-13

Dy Chief Engineer/Const./NCR, Allahabad for and on behalf of the President of India, invites sealed open tenders on the prescribed form for the under noted work:

SN.	Tender No.	Name of work	Cost of work	Earnest Money	Completi on period	Cost of tender form	Date of opening
1.	11/12-13	Construction of Additional New Washing Line 24 length coaches including linking of track and other misc. work in Allahabad Yard.	Rs.263.74 Lakh	Rs.2,81,880/-	12 Months	Rs.10,000/- + 7% UPTT	12-03-2013

1. Earnest money mentioned above is to be submitted in favour of FA&CAO/C/NCR/Allahabad. **Tenders not accompanied with earnest money in valid form in favour of specified authority will be summarily rejected.**

2. Tenderer as individual or partnership firm or company fulfilling following minimum eligibility criteria shall only be considered eligible for award of work:

- (i) The tenderer should have completed successfully atleast one work of similar nature for a minimum value of 35% of advertised cost of work in last three financial years and up to date of opening of tender in current year. The similar work is defined as **“Any Civil Engineering Work”**.
- (ii) The tenderer should have received total contract amount during last three financial years and up to date of opening of tender in the current year as per latest audited books of accounts of a minimum value of 150% of advertised cost of work.

3. **Tenderer shall submit documents in support of minimum eligibility criteria alongwith the tender. No documents in support of minimum eligibility criteria will be accepted/entertained after opening of tender.**

4. Tender forms shall be available on sale in the office of Dy. Chief Engineer/Construction/North Central Railway/ Nawab Yusuf Road, Valmiki Chauraha, Allahabad, Dy.Chief Engineer/Construction/ North Central Railway, Jhansi & Chief Project Manager, IRPMU, Shivaji Bridge, New Delhi w.e.f. 15 days prior to date of opening and on payment of cost of tender document in cash as mentioned above. Tender document can also be obtained by post by sending a demand draft for tender cost and Rs.500/- extra for postal charges in favour of FA&CAO/C/NCR/Allahabad.

5. Tender documents will also be available on the net and can be down loaded from Railway web site www.ncr.indianrailways.gov.in. & www.tenders.gov.in In case of down loading of tender form from Railway’s web site, the cost of tender form should be submitted through demand draft in favour of FA&CAO/C/NCR, Allahabad along with the tender; otherwise, tender will not be considered.

6. The cost of tender document is non-refundable and tender document is non-transferable.

7. Tender forms complete in all respects should be deposited in the tender box allotted for the purpose in the office of Dy. Chief Engineer/Construction/ North Central Railway /Nawab Yusuf Road, Valmiki Chauraha, Allahabad or Dy.Chief Engineer/Construction/ North Central Railway, Jhansi or Chief Project Manager, IRPMU, Shivaji Bridge, New Delhi up to 15 00 hours on or before the date of opening as mentioned above and shall be opened at 15.30

Signature of the Tenderer

hours. Tenders duly sealed can also be sent through registered post so as to reach in the office not later than 15.00 hours on the date of opening. Any tender received late is liable to be rejected.

8. The tenderer for carrying out any construction work in Uttar Pradesh must get themselves registered from the Registering Officer under Section-7 of the Building and other Construction Workers Act, 1996 and rules made thereto by the Uttar Pradesh Government and submit certificate of Registration issued from the Registering Officer of the Uttar Pradesh Government (Labour Department). For enactment of this Act, the tenderer shall be required to pay cess @ 1% of cost of construction work to be deducted from each bill. Cost of material shall be outside the purview of cess, when supplied under a separate schedule item.

Dated: 31-01-2013

**Dy Chief Engineer/Const.
NC Railway, Allahabad**

Copy to:

1. Chief Administrative Officer /Const/ Allahabad
2. Principal Chief Engineer/NCR, Allahabad.
3. Chief Engineer/Const./North, Central, Chief Engineer/Track, Chief Bridge Engineer, Chief Planning & Design Engineer, North Central Railway, Allahabad.
4. FA & CAO/C/NCR/ALD. He is requested to depute his representative in the office of CPM/IRPMU, Shivaji Bridge, New Delhi and DYCE/C/NCR/ Allahabad & Jhansi on the date of opening of the tender at the said time and date.
5. CPM/IRPMU, Shivaji Bridge, New Delhi. He is requested arrange sale of Tender Documents from his office and to please depute one officer for opening of tender at the specified place and time (WKD No.42000 & Allocation: DF-II)
6. Dy Chief Engineer/Construction/Jhansi. He is requested arrange sale of Tender Documents from his office and to please depute one officer for opening of tender at the specified place and time (WKD No.42000 & Allocation: DF-II).
7. The Divisional Railway Manager/North Central Railway, Allahabad, Jhansi & Agra.
8. Dy Chief Engineer/Construction/North Central Railway/Allahabad, Kanpur, Gwalior & Agra Cantt., Dy CE/TP, CSP, TM, P&D, Bridge, Works/NCR/ALD and Dy CE/TMC/Line/Jhansi.
9. The Audit Officer/Const/North Central Railway/Allahabad.
10. Chief Security Commissioner/NCR/ALD. He is requested to please depute his staff to take up security arrangement of the tender box in the office of Chief Project Manager, IRPMU, Shivaji Bridge, New Delhi, Dy. Chief Engineer/Construction/ North Central Railway /Nawab Yusuf Road, Valmiki Chauraha, Allahabad & Dy. Chief Engineer/Construction/ North Central Railway, Jhansi on the date of opening of the tender at the said time and date.

Signature of the Tenderer

11. Superintendent of Police, Allahabad. He is requested to please depute his force to take up security arrangement of the tender box in the office of Dy. Chief Engineer/Construction/ North Central Railway /Nawab Yusuf Road, Valmiki Chauraha, Allahabad, on the date of opening of tender.
12. AXEN/C-I/NCR/ALD for opening of tenders in the office of Chief Project Manager, IRPMU, Shivaji Bridge, New Delhi.
13. AXEN/C-II/NCR/ALD for opening of tenders in the office of Dy. Chief Engineer/Construction/ North Central Railway /Nawab Yusuf Road, Valmiki Chauraha, Allahabad
14. On the Notice Board in the office of CAO/C/NCR/ALD and Dy. CE/C/NCR/ALD.

END of Tender Document

Signature of the Tenderer