

**Special Condition :**

1. Cement and steel required for the work, contractor should supply and delivery to the IOW's godown as per programme and the cement and steel will be issued to the contractor as per scale of consumption from IOW's godown and all lead, lift, handling etc. to the site of work will be at the expense of the contractor. Necessary facilities for storage shall be provided by the contractor to IOW.
2. Unless specifically mentioned in the schedule of rates all materials required for execution of work will be supplied by the contractor free of cost as per standard specifications and approved by the Engineer-in-charge.
3. All works are to be done as per programme fixed by the Engineer-in-charge or his authorised representative and as per their direction only.
4. All materials to be supplied by the contractor should be got approved by the Engineer-in-charge before use in the work.
5. During the course of work steel are to be got tested by the contractor at their own cost to ascertain their conformity to specification as and when required by the Engineer-in-charge or his authorized representative.
6. The steel supplied by the contractors must conform to specification IS 2062 or relevant latest BIS Codes.
7. Riveting should be done as per the clauses as laid down in IRUSS (Works & Materials), Vol.- I Chapter 8.
8. All the scrap and released materials to be returned to the Railway as per instructions given by the Engineer – in - charge or his authorized representative at their nominated places after completion of the work.
9. The steel that will be supplied by the contractor should conform to I.S. 226/I.S. 1977 (Ordinary) for mild steel and I.S. 1481 for rivets followed with latest corrections if any. All steel section, Rivets, Paint, etc. are to be got tested as per relevant BIS codes at the contractor's expense by the Chief Chemist and Metallurgist, S.E.Railway / Kharagpur or at National Test House, Alipore, Kolkata as found convenient by the Railway. If the test results do not confirm to the relevant IS specifications, the whole lot / lots of materials shall be rejected and got removed from the site by the contractor at the contractor's cost. No payment will be made for rejected works.  
Manufacturer's test certificate is to be submitted by the contractor along with necessary purchase vouchers etc.
10. All fabrication and erection shall be done in accordance with I.S.800:62 as per approved drawings followed with latest corrections if any.
11. The fabrication of shed structure shall be by riveting and or welding excepting gantry girders, which shall be by riveting only.
12. Riveting / welding shall not be started until such time the Engineer has personally satisfied himself that the alignment of the structure is correct.
13. All works are to be done following the special conditions for painting which are attached herewith.
  - (a) Paints and primers shall be procured exclusively from manufacturers approved by the Research Designs and Standards Organisation (RDSO) or the National Test House (NTH) for the specific grade of paint, or firms of repute conforming strictly to the relevant Indian Standards (IS).  
All painting materials (primers, undercoats, and finishing coats) used for a specific structure must be procured from the same manufacturer to ensure chemical compatibility and systemic performance.  
Before incorporating the material into the work, the contractor shall submit the Manufacturer's Test Certificate (MTC), alongside original purchase vouchers/invoices indicating the batch numbers, to the Engineer-in-Charge.

Independent sampling and testing may be carried out by the Railway at the contractor's cost in accordance with IRUSS Specification to verify compliance.

- (b) All paint drums/containers shall be brought to the site with original seals intact. The empty drums of paints used in this work will be the contractor's property and will remain kept in Supervisor's custody till the completion of work and after completion of each work the empty drums will be returned to the contractor.
- (c) The painting system, surface preparation, and Dry Film Thickness (DFT) shall strictly conform to IRUSS specifications and the relevant Indian Standards listed below. Thickness of paint layer should be strictly followed as given as given below :-
  - i. 1st coat primer Zinc chromate IS: 104 ... 20 microns ( Dry film thickness ).
  - ii. 2nd coat primer before Red oxide IS 2074 ... 20 microns ( Dry film thickness ).
  - iii. 1st finishing coat of Aluminium IS: 2339 ...15 microns ( Dry film thickness. ).
  - iv. 2nd finishing coat of Aluminium IS: 2339 ...15 microns ( Dry film thickness. ).

- 14. No compensation towards any accident what – so – ever will be paid by the Railway.
- 15. The Railway will not be responsible for compensation towards contractor's idle labour in case traffic block cannot be arranged to the contractor as per programme due to unforeseen reasons.
- 16. Contractor shall not start any work without the presence of the IOW / PWI at site. In case the contractor's representative starts any work in absence of IOW / PWI, it shall be treated as unauthorised and illegal tampering with the track and shall be liable for action.
- 17. In case contractor fails to return the unused and excess materials issued to them and released materials, the cost of such materials will be deducted from the contractor's dues as per Railway's rules laid down in Indian Railways General Conditions of Contract or any other circular or notification as applicable.
- 18. The contractor should mobilise to do night depot working for which they will be required to have their own sufficient lighting arrangement. No extra payment will be admissible on this account.
- 19. All P.Way and Civil contractors that all labours engaged on any work on track and civil construction site must be equipped with all necessary safety equipment like green retro reflective safety jacket, safety helmet and safety shoe, harness etc. as per direction of Engineer-in-charge or his authorize representative at site all the times without fail.
- 20. All works have to be done under traffic. In electrified territory contractor will take all precautions for safety of track and running trains as well as his labour in terms of Indian Railway's P.Way manual.
- 21. The Contractor with the help of his Engineer or Diploma holder, as the case be, shall make necessary Drawings, sketches, plotting, peg markings etc. as desired by the Engineer-in-charge. No extra cost shall be claimed on this account.
- 22. The work will be executed under supervision of Railway Engineer- in – charge or his authorized representative at site.
- 23. The agency should depute a trained and certified supervisor duly certified by AEN.
- 24. New member which are fixed to the old structure, payment of such steel will be made as per respective item of CPWD DSR and SER-IR-USSOR.
- 25. The Contractor should be made available all the necessary tools, plants and equipment for execution of the above work at site during execution of work.

26. The vehicles and equipment of contractors can drafted by Railway Administration in case of Accidents / Natural calamities involving human lives, and payment in respect of that would be made by operating the item as a non scheduled item.
27. The Contractor should furnish a list of vehicles and equipments available with them along with the tender documents.
28. The following documents should be specified for submission along with tender:
- a) List of Personnel, Organization available on hand and proposed to be engaged for the subject work.
  - b) List of Plant & Machinery available on hand (own) and proposed to be inducted (own and hired to be given separately) for the subject work.
  - c) List of works completed in the last three financial years giving description of work, organization for whom executed approximate value of contract at the time of award, date of award and date of scheduled completion of work. Date of actual start, actual completion and final value of contract should also be given.
  - d) List of works on hand indicating description of work, contract value and approximate value of balance work yet to be done and date of award.

**29. Cement:**

Only Ordinary Portland Cement (OPC) and Pozzolana Portland Cement (PPC) shall be used for design mix concrete. Cement of 43/53 Grade must conform to IS: 8112 and IS: 12269, respectively, and Portland Slag Cement (PSC) must conform to IS: 455.

Testing shall be conducted batch-wise for physical properties to ensure compliance with the relevant IS Codes. All cement must be sourced from manufacturers that strictly conform to the specified IS Codes as directed by the Site Engineer.

**30. Reinforcement:**

- (a) Reinforcement steel should confirm to IS: 1786. Testing of reinforcement steel shall be done for physical properties batch wise.
- (b) Steel can be procured from any **Primary Steel Producers** having Integrated Steel Plant (ISP) and using iron ore as the basis raw material and having in house iron rolling facilities, followed by production of steel through the process of DRI-EAF, BF-BOF and COREX-BOF.
- (c) List of firms which were earlier approved by RDSO and were having the required facility are:
  - i) **Steel Authority of India Limited (SAIL)**
  - ii) **Rashtriya Ishpat Nigam Limited (RINL)**
  - iii) **Tata Steel Limited (TSL)**
- (d) The contractor shall produce the certificate issued by plant manufacture/plant consultant (with documentary proof of process) for establishing process being used at plant. It must be ensured that steel being supplied is produced by any one of the processes i.e. DIR-EAF, BF-BOF and COREX BOF route only, for manufacturing TMT reinforcement bar using iron ore as basis raw materials.
- (e) The contractor shall disclose the source from where supplies of steel is received by him and maintain a detailed record of receipt of steel from different sources and shall keep the challan, Railway receipts number if any, lorry number, etc., and store balance in a register as directed by the Engineer-in-Charge and produce the same to the Engineer as and when demanded. Railway reserves the right to inspect contractor's godown and documents pertaining to their work. Steel supplied should be free from rust paint, loose scales etc. The contractor shall make his own arrangements for storing steel.
- (f) Payment towards steel will be made on the basis of theoretical consumption as per drawing & bar bending schedule, steel for lap length as per approved Bar bending schedule shall be paid added to the theoretical consumption. No other wastage on any of the materials supplied and used in the work by the contractor including steel is payable by the railway.
- (g) In case of any doubts regarding quality of steel, the Railway may cause it to be tested by any third party including IIT/NIT/ or any other approved Lab of repute and acceptance of the supplied steel shall be subject to such test results. Cost incurred towards conducting necessary tests will be borne by the contractor.

### 31. Reinforcement & Cement:

Reinforcement Steel to be used in the work shall be of high yield strength deformed bars cold twisted / hot rolled or re-bars produced by above mentioned process/firms only. Reinforcement steel should confirm to IS: 1786 Testing reinforcement steel shall be done for physical properties batch wise. Only OPC/PPC shall be used for design mix concrete conforming to relevant IS Code as per directed by engineer-in-charge.

### 32. Binding Wire:

Binding wire to be used in the work should be of standard quality. The diameter shall be between 16 to 22 SWG.

### 33. Codes:

The following Codes of Practice latest revised with up to date corrections shall be followed:

- (i) IS-456-2000 Indian standard code of practice for plain and reinforced concrete.
- (ii) IS: 1199 Method of sampling and analysis of concrete.
- (iii) IS: 516 Method of test for strength of concrete.
- (iv) Standard Specification for structural steel (standard quality)- Fifth revision.
- (v) IS: 226 Specification for structural steel (Standard quality)- Fifth revision.
- (vi) IS 2062-1984 Specifications for Weldable structural steel.
- (vii) IS: 383-1970 Code of practice for fine & coarse aggregate.
- (viii) IS: 800 Code of practice for use of structural steel in general building construction (revised 8th print April 1977 incorporating amendments No. 1 & 2).
- (ix) IS: 432-Pt. I- Code of practice for mild steel and medium tensile steel bars.
- (x) IS: 1785-Plain and hard drawn steel wire for pre stressed concrete (latest addition).
- (xi) IS: 1786 Code of practice for high strength deformed steel bars and wires for concrete reinforcement.
- (xii) IS: 269 for ordinary Portland cement.
- (xiii) IS: 8112 / IS: 12269 High strength OPC 43 and 53 grade respectively
- (xiv) IS: 961- Structural steel (High tensile).
- (xv) IS: 10262-1982 Recommended guidelines for Concrete Mix Design
- (xvi) IS 1343 Code of practice for Pre stressed concrete
- (xvii) IS 6006-1983 Specifications for pre-stressed stress relieved strands for Pre stressed Concrete
- (xviii) IS 1785 Part-I Specifications for plain hard drawn steel wires for pre stressed concrete
- (xix) IS: 1599
- (xx) Indian Railway Schedule of Dimensions for Broad Gauge including correction slips.
- (xxi) IS-1498/1970 Classification and identification of soil.
- (xxii) IS Code 10379-1982 "Code of practice for field control of Moisture and compaction of soil for embankment and sub grade.
- (xxiii) Indian Railway permanent way manual (second reprint -2004) amended upto date.
- (xxiv) Central Public Works Department - Delhi Schedule of Rates-2021 i.e. DSR-2021,
- (xxv) Central Public Works Department Horticulture-2020 i.e. CPWD Horticulture-2020
- (xxvi) Indian Railways Unified Standard Schedule of Rates-2021 i.e. IRUSSOR-2021
- (xxvii) Indian Railway Code for the Engineering department ( third reprint-1999).
- (xxviii) Durability of concrete structures, report no. BS-14 (revised) by RDSO.
- (xxix) Indian Railway Schedule of Dimensions for Broad Gauge including correction slips.
- (xxx) Guide lines for earthwork in railway projects, July-2003 with latest amendment issued by RDSO/Lucknow.
- (xxxi) IRS Concrete Bridge Code – 1997.

Wherever any reference to Code, Specifications etc., is made in this document, it shall be taken as a reference to the latest version thereof including all amendments and corrections etc. However, where these specifications do not cover full details relevant Indian Standard Specification shall be followed. Decision of the Chief Engineer shall be final in this regard.

34. The presence of contractor's operators / supervisor at each work site ( P.Way or Civil Or Bridge ) a must for proper supervision of work. It is advisable to depute Rly's retired P.Way supervisor staff /works supervisory staff, bridge supervisor staff as the case may be for this purpose, who as already trained in such works. However, if the contractor intends to engage any supervisor from outside for P.way work he must get trained in the Divisional Training school of the Division P.Way works for a period of 6 (Six) days, for which the contractor has to pay Rs.700/- per Trainee per day towards training charges excluding lodging and boarding charges. After successful completion of the training, a certificate of competency shall be issued by the Divisional Training school at the minimum level of AEN. Only such outside operators/supervisors of contractor who have been trained in the Division Training school and possess a competency certificate issued by AEN shall be permitted in supervise the work at the work site. Retired supervisors of Railway, however need not be trained. Similarly for any Civil / Bridge work which has the potential to cause unsafe condition for moving traffic, if any outside supervisor is engaged by the contractor, he shall be got trained in similar manner for such Civil / Bridge work in the Divisional Training School and obtain a competency certificate from AEN before he is permitted to at work site to supervise the work.
- 35 For works of public nature contractor shall fix an information board containing information related to work order at prominent place free of cost. The content of such board, its fixing location, size and type of material etc. shall be as approved by Engineer- in – Charge. The board shall be maintained by contractor during the currency of work order. If contractor fail to fix the information board for nominated work orders, a token penalty as deemed suitable as per GCC may be imposed by Engineer in – charge.
36. The items covered under CPWD DSR, CPWD Horticulture and SER-IR-USSOR are tentative and approximate and these are considered for evaluation of DV only. However the items covered under CPWD DSR, CPWD Horticulture and SER-IR-USSOR may be altered within the scope of work as per instruction of Engineer- in – Charge according to site requirement if required. Decision of Engineer – in – Charge in this regard will be final & binding to all.
37. For all Items of the schedule.  
Unless otherwise specified in the schedule of items, the rate quoted by the tenderer includes.
- a) All labour, tools, plant, equipment and machinery etc.
  - b) All lead, lift, ascent, descent, jungle clearance and making approach roads etc.
  - c) Loading, unloading, handling, re-handling and transportation of Railway materials from Railway depot to site of work & vice-a-versa.
  - d) All royalty, octroi and other necessary taxes on materials and products.

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