

भारत सरकार Government of India रेल मंत्रालय Ministry of Railways (रेलवे बोर्ड Railway Board)



No.2018/CE-I/CT/36-EPC Contract Policy Pt.2

New Delhi, Dated 01.03.2024

To,
As per list attached

Sub: Inclusion of Separate Bill of Quantities (BOQ) for itemized Work as Schedule G-1 in Standard EPC Tender Document

Ref: Railway Board's letter No. 2018/CE-I/CT/36-EPC Contract Policy pt-1, dated 24.08.2021 including all ACS to EPC Tender Document

In order to address uncertainties in the EPC tendering mode, it has been decided by Board (MI, MF) to empower PHOD/(CAO/C/ZR) to APPROVE, if required, the inclusion of Schedule G-1 {separate Bill of Quantities (BOQ) for itemized Work} in the EPC agreement issued vide letter No. 2018/CE-I/CT/36-EPC Contract Policy/Pt-1, dated 15.11.2021'.

- 2. Inclusion of Schedule G-1 is optional/ discretionary and contingent upon the project specific needs of the respective Zonal Railways. However, in case G1 is to be made operational, eligibility criteria of such EPC tender shall be evaluated on the basis of total Tender value which also includes the value of Schedule G-1.
- 3. The aspect of Vitiation if any, shall be governed as per the extant instructions of Railway Board.
- 4. The Schedule G-1, which includes a separate Bill of Quantities (BOQ) for itemized works, is attached as **Annexure**.
- 5. This issues with the concurrence of the Finance Directorate of Ministry of Railways.

DA: As Above

कार्यपालक निदेशक/सिविल इंजी.(जी)/रेलवे बोर्ड

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No.2018/CE-I/CT/36-EPC Contract Policy Pt.2

New Delhi, Dated 01.03.2024

Copy forwarded for information to:

(i) The PFAs, All Indian Railways.

(ii) Dy. Comptroller and Auditor General of India (Railways), Room No. 224, Rail Bhawan, New Delhi.

For Member Finance

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LIST FOR DISTRIBUTION (No.2018/CE-I/CT/36-EPC Contract Policy Pt.2, dated 01.03.2024)

- 1. General Managers, All Indian Railways & Production Units
- 2. General Manager (Con), N.F. Railway, Guwahati
- 3. General Manager /CORE, Allahabad.
- 4. Chief Administrative Officers (Con), All Indian Railways (Except N.F. Railway)
- 5. Principal Chief Engineers, All Indian Railways

(A)

- 1. CAO, COFMOW, Tilak Bridge, New Delhi
- 2. Principal CAO, Diesel Loco Modernization Works, Patiala (Punjab)
- 3. CAO (Workshop Projects), Chamber Bhawan, Judge's Court Road, Anta Ghat, Patna-800001, Bihar

(B)

- 1. Director General, RDSO, Manak Nagar, Lucknow
- 2. Director General, NAIR, Vadodara
- 3. Director, IRICEN, Pune 411 001 (Maharashtra)
- 4. Director, IRIEEN, PB No.-233, Nasik Road-422101 (Maharashtra)
- Director, IRISET, Taa Naka Road, Lalla Guda, Secunderabad-500017
- 6. Director, IRIMEE, Jamalpur Distt-Jamalpur, PIN-811214 (Bihar).
- 7. Director, IRITM, Sarswati Residential Estate, IRITM Campus, Manak Nagar, Lucknow

(C)

- 1. MD, CONCOR, Concor Bhawan, C-3, Mathura Road, Opp. Apollo Hospital, New Delhi- 110076.
- 2. IRCON International Limited, C-4, District Centre, Saket, New Delhi- 110017
- 3. MD, RITES Ltd., RITES Bhawan, Plot No.1, Sector-29, Gurgaon.
- 4. CMD, RVNL, August Kranti Bhawan, Plot No.25, 1st Floor, Bhikaji Cama Place, New Delhi.
- 5. MD, MRVC Ltd., Churchgate Station Bldg, Mumbai- 400020
- 6. CMD, KONKAN Railway Corporation Ltd, Rail Bhawan, New Delhi-110001.
- 7. MD, DFCCIL, 5th Floor, Pragati Maidan Metro Station Building Complex, New Delhi-110001
- 8. MD, RLDA, Near Safdarjung Railway Station, Moti Bagh, Phase-I, New Delhi- 110021
- 9. MD, CRIS, Chanakyapur, New Delhi.
- CMD, RailTel Corporation of India Ltd. Plot No. 143, Institutional Area, Sector-44, Gurgaon 122003
- 11. CME, IROAF, 12th Floor, Core-1, Scope Minar, Distt. Centre, Laxmi Nagar, Delhi- 110092
- 12. Managing Director, IRFC Limited, UG Floor, EastTower, NBCC Place, Bhisham Pitamah Marg, LodhiRoad, Pragati Vihar, New Delhi.
- 13. CMD, IRCTC Ltd., B-148, 11th Floor, Statesman House, Barakhamba Road, New Delhi 110001
- 14. CMD, Braithwaite & Co. limited, 5 Hide Road Kolkata 700043.

Copy to:

<u>(A)</u>

- 1. General Secretary, IRCA, DRM Office, New Delhi.
- 2. General Secretary, AIRF, Rail Bhawan, New Delhi
- 3. General Secretary, NFIR, Rail Bhawan, New Delhi
- 4. General Secretary, IRPOF, Rail Bhawan, New Delhi
- 5. General Secretary, FROA, Rail Bhawan, New Delhi
- 6. General Secretary, AIRPA, Rail Bhawan, New Delhi
- 7. General Secretary, AISC & STREA, Rail Bhawan, New Delhi
- 8. The Secretary, RBSS, Group (A) Offices Association, Rail Bhawan
- 9. The Secretary, RBSS, Group (B) Offices Association, Rail Bhawan
- 10. General Secretary, RBSSS Association, Rail Bhawan
- 11. The Secretary, RBMSA, Rail Bhawan
- 12. The Secretary, Railway, Group (D) Employees Association, Rail Bhawan

 (\mathbf{R})

- Concerned PSO for kind information of Chairman cum CEO, M/Infra, M/T&RS M/O&BD, M/Finance, Railway Board
- 2. Adv./MR, EDPG/MR, OSD/MR, OSR(Co-ord)/MR
- 3. Chief Vigilance Officers, All Indian Railways.
- 4. DG(RHS), DG(RPF), AM(CE), AM(Works), AM(B), AM(Elec.), AM(RS), AM(ME), AM/Tele, AM/C&IS, AM/Sig., AM(Plg.), PED(B&S), PED(Vigilance), PEDCE(P), PED/Gati Shakti, EDCE(G), EDTK(M&MC), EDCE(B&S), EDF(X), ED/GS(Civil-I), ED/GS(Civil-II), ED/GS(Elect.), ED/GS(S&T), EDW(Plg.), ED(L&A), ED(PSU), EDVE, ED(Safety), ED(Sig. Dev.), ED(Tele), EDRS(G), EDEE(G), EDFE, EDE(N), ED(Accounts), ED/T&MPP, EDME(Chg.), EDME(Frt.), ED/Plg., JS(conf), JS(P), JS(G), JS(D), Vigilance-III, Vig(Conf) of Railway Board.

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Annexure

Schedule G-1

Separate BOQ for Itemised Work

SCHEDULE – G1 Contract Price Weightages (For BOQ Items)

¹If required, PHOD/(CAO/C/ZR) may APPROVE to attach this separate BOQ along with the ECP agreement documents i.e Standard Agreement of EPC Tender Document for single stage Two Packet System No. 2018/CE-I/CT/36-EPC Contract Policy/Pt-1, dated 15.11.2021'

| 1. | The Contract I | Price for this | s schedule (| G1) of | Agreement is | Rs. | | |
|----|----------------|----------------|--------------|--------|--------------|-----|--|--|
| | | | | | | | | |

- 2. Schedule G1 consists of three parts as under of which any or all schedules may be used as per the requirement. However, main schedule (G1A/G1B/G1C) may be bifurcated into item wise i,e, : G1A may be bifurcated broadly into foundation & sub-structure and further into pile, well and column, wall etc for clarity. Similarly G1B & G1C may also be bifurcated.
- 3. Rate should be quoted (% above/Below/at par) for schedule of G1. No Separate rates should be quoted for schedule G1A, G1B & G1C. Example:

| C.1. 1.1. I. O. C. D. Maniple. | | | | | | | | |
|--------------------------------|-----|--------|--|----------------|----------------------|--|--|--|
| Schedule Item Quantity A | | Amount | Total Amount of | Rate quoted (% | | | | |
| | | | | Schedule G1 | above/Below/at par) | | | |
| | | | | Senedare G1 | acover Belowiat par) | | | |
| | *** | @@@ | \$\$\$ | | 1 | | | |
| | | | | | | | | |
| G1A | *** | @@@ | \$\$\$ | | | | | |
| | *** | 888 | ### ### ### ########################## | Э. | | | | |
| | | @@@ | \$\$\$ | | | | | |
| | *** | @@@ | \$\$\$ | | | | | |
| | | | | | | | | |
| | *** | @@@ | \$\$\$ | | | | | |
| | *** | | | | | | | |
| G1B | *** | @@@ | \$\$\$ | \$\$\$ | > | | | |
| GID | *** | @@@ | \$\$\$ | 344 | | | | |
| | | | | | | | | |
| | *** | @@@ | \$\$\$ | | | | | |
| | *** | 600 | | | | | | |
| | *** | @@@ | SSS | | | | | |
| H | *** | @@@ | \$\$\$ | | | | | |
| G1C | | | | | | | | |
| | *** | @@@ | \$\$\$ | | | | | |
| | | | | | | | | |
| | *** | @@@ | \$\$\$ | | | | | |

¹ Serially numbered footnotes in this separate BOQ items of Agreement are for guidance of the Authority and should be omitted from the draft EPC Agreement forming part of Bid Documents $\int_{\mathbb{R}^n} \int_{\mathbb{R}^n} \int_{\mathbb{R}^n$

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4. Schedule G1

| Schedule | Description | Item | Value of | Payment | Applicable | PVC |
|--------------|-------------------|--|--------------|-------------------------------|------------------------|------------|
| | 25. 8 | | Item/ | Procedure | rates | applicable |
| | | | Schedule | 3 | | |
| G1A | For | ² NS items / | | Payment shall be | 1 | XXX |
| a a constant | Foundation | latest version | RS. ***** | made on actual | Para-3 above | |
| | and | of both | | work done as per | | |
| | Substructure | USSOR/ | | work done | - | |
| | × | CPWD DSR | | measured while | | |
| | × | | | submitting stage | | |
| 2 | | | | payment | . 1 | |
| | | | | certificate. | | |
| G1B | For Utility | ³ NS items / | | Payment shall be | | XXX |
| | Shifting | latest version | RS. **** | made on actual | | |
| | Work | of both | | work done as per | | |
| 5 0 1 5 5 V | | USSOR/ | | work done | | |
| | | CPWD DSR | 200 E 1 E 18 | measured while | | |
| | | | | submitting stage | Strate of the state of | |
| | ν. | | | payment | 50 | |
| 010 | Γ | 4010 | | certificate. | A - I - I - I - I - D | |
| G1C | For Unforeseen | ⁴ NS items / | DC ***** | made on actual | As detailed in Para- | XXX |
| 4 | Work | | KS. | | | |
| | WOIK | of both | | work done as per work done | | |
| 1 6 | | USSOR/ | | measured while | | |
| | | CPWD DSR | | submitting stage | | |
| | | | | | | , |
| | | | | | | |
| | lai galanga | and the second of the second o | | payment certificate. | | \(\sigma\) |

Note: 1) Before start of any sub-work(s) under Schedule G-1, Drawing, Method Statement, BOQ etc. shall be finalised and approved from Authority.

5. The list of Articles of 'Standard Agreement of EPC Tender Document for single stage Two Packet System dated 15.11.2021' given below, shall be superseded by the Articles of this document in case G1 is to be made operational.

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^{\$(2)} Items covered under Schedule G-1 shall be deleted from Schedule-G)

^{2,3,4} any or all may be used as per the requirement

^{\$} for guidance of the Authority and should be omitted from the draft EPC Agreement forming part of Bid Documents

List of Articles to be superseded

- 1. 9.2.1:
- 2. 10.1.4:
- 3. 13.1.2;
- 4. 13.1.3:
- 5. 13.2.2;
- 6. 13.2.3;
- 7. 17.1.1;
- 8. 17.3.1;
- 9. 17.3.2;
- *J.* 17.5.2,
- 10. 17.3.3;
- 11. 17.4;
- 12. 17.8.4:
- 13. 21.5.1;
- 14. Schedule -G, 1.1
- 6. Following Articles shall prevail over the Articles of 'Standard Agreement of EPC Tender Document for single stage Two Packet System dated 15.11.2021'

9.1.1 ⁵(New)

The works of shifting of utility (ies) owned by Railways and already communicated to Contractor as part of Tender document shall be part of schedule-G.

9.1.2 ⁶(New)

Diversion of utility(ies) not owned by Railways or not communicated to Contractor as part of Tender document shall be payable under BOQ items of relevant Schedule-G1

9.1.3 ⁷(New)

List of utilities (Railway owned or other) is being made available to the contractor as part of Tender document. However, the contractor shall have to conduct the inspection/investigation of the utilities before execution of the work independently.

9.2.1 ⁸(Amended, in case G1 is to be made operational)

The Contractor shall, in accordance with Applicable Laws and with the proactive support & assistance of the Authority, cause shifting of utility(ies) as per 9.1.2 (including electric lines,

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^{5, 6, 7, &}amp; 8 Serially numbered footnotes in this separate BOQ items of Agreement are for guidance of the Authority and should be omitted from the draft EPC Agreement forming part of Bid Documents

water pipes and telephone cables) to an appropriate location or alignment, if such utility or obstruction adversely affects/ infringes the execution of Works in accordance with this Agreement. The utilities are to be diverted with proper liaison and approval of the utility owning agencies. NOC & Approval of schemes of Diversion of Utilities from the concerned regulatory /statutory / Local Authority is the responsibility of the Contractor. Cost of such utility shifting unless otherwise specified will be paid separately under relevant item of BOQ (Schedule G1B). No claim on account of delay in execution of utility diversion will be entertained.

10.1.4 ⁹(Amended, in case G1 is to be made operational)

The Contractor shall plan the project work by keeping Schedule-G and G1 into consideration in order to maximise the cash flow and progress. However, the Authority Engineer may modify/break up any of the stage payment schedule (payment milestones) during execution if the same is considered essential to speed up the progress or if the contractor is not able to achieve a particular payment milestone due to the reasons/delays attributable to the Authority or due to the factors beyond the control of Contractor or to any unforeseen circumstances.

13.1.2 ¹⁰(Amended, in case G1 is to be made operational)

Change of Scope shall mean:

- (a) change in specifications of any item of Works;
- (b) omission of any work from the Scope of the Project except under Clause 8.3.3; provided that, subject to Clause 13.5, the Authority shall not omit any work under this Clause in order to get it executed by any other entity; or
- (c) any additional work, Plant, Materials or services which are not included in the Scope of the Project, including any associated Tests on completion of construction. However any unsanctioned work which is independent work per se shall not be considered as Change of scope;
- (d) Variation in the quantities of certain items (positive or negative) necessitated due to any change(s) in the L-Section/Alignment/ESPs of the Project with respect to those attached with this document, except on account of existing ground conditions mentioned in L-Section/Alignment/ESPs. For avoidance of doubt, it is clarified that the existing ground conditions are to be validated by bidders before bid and hence no change on this account is payable, except for works under schedule G1.

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^{9&10} Serially numbered footnotes in this separate BOQ items of Agreement are for guidance of the Authority and should be omitted from the draft EPC Agreement forming part of Bid Documents

(e) any change in quantities under Schedule G1;

13.1.2.1 11 (New)

Unless parties agree to the contrary, following shall be the limits of variation for items of works under Schedule G1;

| (a) | For Items related to work of foundation | No Limits |
|-----|---|-----------|
| | | 7 |
| | | |
| (b) | For Items in Schedule G1 related to works other than foundation | 25% |

13.1.3 ¹²(Amended, in case G1 is to be made operational)

- (1) If the Contractor determines at any time that a Change of Scope will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Authority of executing, maintaining or operating the Railway Project, (iii) improve the efficiency or value to the Authority of the completed Railway Project, or (iv) otherwise be of benefit to the Authority, it shall prepare a proposal with relevant details, as under:-
 - (a) for works under schedule G, and for items covered under schedule G1 beyond the limits of variation mentioned in article 13.1.2.1, at its own cost; or
 - (b) for works under schedule G1 within the limits of variation mentioned in article 13.1.2.1, as per cost derived on the basis of accepted rates of respective items under schedule G1.

The Contractor shall submit such proposal, supported with the relevant details including the amount of reduction in the Contract Price, if any, to the Authority to consider such Change of Scope. The Authority shall, within 15 (fifteen) days of receipt of such proposal, either accept such Change of Scope with modifications, if any, and initiate proceedings therefor in accordance with this Article 13 or reject the proposal and inform the Contractor of its decision.

(2) In case Change of Scope is proposed by Authority Engineer to the contractor is for items covered under schedule G1 within the limits of variation mentioned in article 13.1.2.1, the

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should be omitted from the draft EPC Agreement forming part of Bid Documents

contractor shall accept and continue the works as per rate accepted for those items/schedules under schedule G1.]

In case Change of Scope is proposed by Authority Engineer to the contractor [is for the items not covered either in the scope of work under schedule G, or within the limits of variation mentioned in article 13.1.2.1 for the items under schedule G1,] the contractor shall, within 15 (fifteen) days of receipt of such proposal, either accept such Change of Scope with modifications, if any, and initiate proceedings therefore in accordance with this Article 13 or reject the proposal and inform the authority of its decision.

For the avoidance of doubt, the Parties agree that the Contractor shall not undertake any Change of Scope without a Change of Scope Order being issued by the Authority, save and except any Works necessary for meeting any Emergency.]

17.1.1 ¹³(Amended, in case G1 is to be made operational)

17.3.1 ¹⁴(*Amended, in case G1 is to be made operational*)

The Authority shall make interim payments to the Contractor, as certified by the Authority Engineer on completion of a Stage, for a length, number or area as specified, and valued in accordance with the proportion of the Price assigned to each item and its stage and payment procedure in Schedule-G or/and as per actual execution of items as specified for works under schedule G1.

17.3.2 ¹⁵(Amended, in case G1 is to be made operational)

The Contractor shall base its claim for interim payment for the stages completed for works under schedule G or/and as per execution of items for works under schedule G1 till the end of the month for which the payment is claimed, valued in accordance with Clause 17.3.1, supported with necessary particulars and documents in accordance with this Agreement.

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^{13, 14, 15 & 16} Serially numbered footnotes in this separate BOQ items of Agreement are for guidance of the Authority and should be omitted from the draft EPC Agreement forming part of Bid Documents

17.4 ¹⁶(Amended, in case G1 is to be made operational) Stage Payment Statement for Works

The Contractor shall submit a statement (the "Stage Payment Statement"), in 3 copies, by the 7th (seventh) day of a month to the Authority Engineer in the form set forth in Schedule-M, showing the amount calculated in accordance with Clause 17.3 to which the Contractor considers itself entitled for the completed stage(s) of Works under schedule G or/and completed items of works under schedule G1. The Stage Payment Statement shall be accompanied with the progress reports and any other supporting documents. The Contractor shall not submit any claim for payment of incomplete stages of work. In the event that there is no claim for a month in accordance with the provisions of this Clause 17.4, the Contractor shall submit a nil claim to the Authority Engineer.

17.8.4 ¹⁷(Amended, in case G1 is to be made operational)

The Contract Price for Works under schedule G shall be adjusted for increase or decrease in rates and prices of labour, Materials, fuel and lubricants, equipment, Machinery, Plant and other Materials or inputs in accordance with the principles, procedures and formulae specified below:

(a)

17.8.4-B ¹⁸(New)

The Contract Price for Works under schedule G1 shall be adjusted for increase or decrease in rates and prices of labour, Materials, fuel and lubricants, equipment, Machinery, Plant and other Materials or inputs in accordance with the principles, procedures and formulae specified below:

- (a) Price adjustment shall be applied on execution of the respective item of work in accordance with Schedule-G1. The 1st Quarter will start from Bid Due date month;
- (b) Adjustment for each item of work shall be made as per classification of those item of work. Classification for item/ work for determining applicable components will be mentioned either in the work order against Schedule G1 or sub schedules of G1.

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^{17 & 18} Serially numbered footnotes in this separate BOQ items of Agreement are for guidance of the Authority and should be omitted from the draft EPC Agreement forming part of Bid Documents

For Civil Engineering Works

| | Classifica | tion | 17 | - <u> </u> | 7- E.S. La | | 1 - 1 9 - 1 | | | | | Ó | |
|---|----------------------------|------|------------|---------------|--------------|----------|-------------|-----|-----|------------------------|------|---------------------------------------|----------------------------|
| S | događenaj Sprajeka i od | | 1A, 2 & 3A | | | | | | | 3B, 4B, 5B, 8B & 9B | 3C,4 | 3D, 4D , 5D, 6D 8D & 9D | 3E, 4E, 5E, 6E, 8E & 9E |
| | Compone | ents | - | 4 | 5A | Y9 15 | 7 | 8A | 9A | 1B, 6B 8 | 5,5 | 3D, | 3E, |
| 1 | Fixed | * | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| 2 | Labour | Lc | 20 | 25 | 30 | 20 | 50 | 20 | 20 | 0 | 0 | 10 | 25 |
| 3 | Steel | Sc | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | 0 | 50 | 0 |
| 4 | Cement | Cc | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 85 | 0 | 0 |
| 5 | Plant Machinery & Spares | PMc | 30 | 15 | 5 | 20 | 15 | 20 | 30 | 0 | 0 | 10 | 30 |
| 6 | Fuel & Lubricants | Fc | 25 | 15 | 5 | 15 | 15 | 20 | 15 | 0 | 0 | 10 | 20 |
| 7 | Other Materials | Mc | 10 | 15 | 30 | 30 | 5 | 25 | 20 | 0 | 0 | 5 | 10 |
| 8 | Detonators & Explosive | Ee | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

* It shall not be considered for any price variation.

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

- 1 Earthwork in Formation
 - 1A All Item(s) excluding 1B or/and 1C
 - 1B Item(s) for supply of Steel
 - 1C Item(s) for supply of Cement
- 2 Ballast Supply Works
- 3 Tunnelling Works (Without Explosives)
 - 3A All Item(s) excluding 3B or/and 3C or/and 3D or/and 3E
 - 3B Item(s) for supply of Steel

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- 3C Item(s) for supply of Cement or/and Grout
- 3D Item(s) for Fabrication & Erection of Structures including supply of Steel
- 3E Item(s) for Fabrication & Erection of Structures excluding supply of Steel.
- 4 Tunnelling Works (With explosives)
 - 4A All Item(s) excluding 4B or/and 4C or/and 4D or/and 4E
 - 4B Item(s) for supply of Steel
 - 4C Item(s) for supply of Cement or/and Grout
 - 4D Item(s) for Fabrication & Erection of Structures including supply of Steel
 - 4E Item(s) for Fabrication & Erection of Structures excluding supply of Steel.
- 5 Building Works
 - 5A All Item(s) excluding 5B or/and 5C or/and 5D or/and 5E
 - 5B Item(s) for supply of Steel
 - 5C Item(s) for supply of Cement
 - 5D Item(s) for Fabrication & Erection of Structures including supply of Steel
 - 5E Item(s) for Fabrication & Erection of Structures excluding supply of Steel.
- 6 Bridges & Protection work
 - 6A All Item(s) excluding 6B or/and 6C or/and 6D or/and 6E
 - 6B Item(s) for supply of Steel
 - 6C Item(s) for supply of Cement
 - 6D Item(s) for Fabrication, Assembly, Erection& Launching of Girders including supply of Steel
 - 6E Item(s) for Fabrication, Assembly, Erection & Launching of Girders excluding supply of Steel
- 7 Permanent Way linking Platform,
- **8** Passenger Amenities
 - 8A All Item(s) excluding 8B or/and 8C or/and 8D or/and 8E
 - 8B Item(s) for supply of Steel item/fittings
 - 8C Item(s) for supply of Cement Item
 - 8D Item(s) for Fabrication & Erection of Structures including supply of Steel
 - 8E Item(s) for Fabrication & Erection of Structures excluding supply of Steel
- 9 Any Other Works not covered in Classification 1 to 8
 - 9A All Item(s) excluding 9B or/and 9C or/and 9D or/and 9E

9B Item(s) for supply of Steel

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9C Item(s) for supply of Cement or/and Grout

9D Item(s) for Fabrication & Erection of Structures including supply of Steel

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

Formulae: The Amount of variation in prices in various components (labour, material etc.) shall beworked out by the following formulae:

(i) L = $(W \text{ or } WSF \text{ or } WF \text{ or } W_{SFL} \text{ or } W_{FL}) \times (L_Q - L_B) \times L_C$

LB x100

(ii) $M = (W \text{ or WSF or WF or WSFL or WFL}) \times (MQ - MB) \times MC$ $MB \times 100$

(iii) $F = (W \text{ or WSF or WF or WSFL or WFL}) \times (FQ - FB) \times FC$ $FB \times 100$

(iv) E = (W) x (EQ EB) x EC EB x100

(v) PM = (W or WSF or WF or WSFL or WFL) x(PMQ-PMB) x PMC

PMB x 100

(vi) $S = (W \text{ or } W_S \text{ or } WSF) \times (SQ-SB) \times SC$

SB x 100

(vii) $C = (W \text{ or } WC) \times (CQ - CB) \times CC$

CB x 100

Where.

L Amount of price variation in Labour

M Amount of price variation in Materials

F Amount of price variation in Fuel

E Amount of price variation in Explosives

PM Amount of price variation in Plant, Machinery and Spares

S Amount of price variation in Steel Supply Item

C Amount of price variation in Cement Supply Item

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- T Percentage variation payable on the gross value of bill of Concreting (Bill(s) ofQuantities for concrete items)
- L_C % of Labour Component in the item(s)
- M_C % of Material Component in the item(s)
- F_C % of Fuel Component in the item(s)
- E_C % of Explosive Component in the item(s)
- PM_C % of Plant, Machinery and Spares Component in the item(s)
- S_C % of Steel Supply item Component in the item(s)
- C_C % of Cement Supply item Component in the item(s)
- W Gross value of work done by Contractor under work orders in schedule G1 or sub schedule of G1, as per stage payment certificate excluding the Gross value of work under W_S or/and W_C or/and W_{SF} or/and W_{FL} or/and W_{FL} and cost of materials supplied by Railway either free or at fixed rate,
- W_S Gross value of work done by Contractor under work orders in schedule G1 or sub schedule of G1, for item(s) of supply of steel.
- W_C Gross value of work done by Contractor Gross value of work done by Contractor under work orders in schedule G1 or sub schedule of G1, for item(s) of supply of cement and /or supply of grout material.
- W_{SF} Gross value of work done by Contractor Gross value of work done by Contractor under work orders in schedule G1 or sub schedule of G1, for item(s) of Fabrication & Erection of Structures including supply of Steel.
- W_F Gross value of work done by Contractor Gross value of work done by Contractor under work orders in schedule G1 or sub schedule of G1, for Fabrication & Erection of Structures excluding supply of Steel.
- W_{SFL} Gross value of work done by Contractor Gross value of work done by Contractor under work orders in schedule G1 or sub schedule of G1, for item(s) of Fabrication, Assembly, Erection / Launching of Girders including supply of Steel.
- W_{FL} Gross value of work done by Contractor Gross value of work done by Contractor under work orders in schedule G1 or sub schedule of G1, for item(s) of Fabrication, Assembly, Erection / Launching of Girders excluding supply of Steel.
- L_B Consumer Price Index for Industrial Workers All India: Published in R.B.I. Bulletin for the base period
- L_Q Consumer Price Index for Industrial Workers All India: Published in R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration

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- M_B Wholesale Price Index: All commodities as published in the R.B.I. Bulletin for the base period
- M_Q Wholesale Price Index: All commodities as published in the R.B.I. Bulletin for the average price index of the 3 months of the quarter under consideration
- F_B The average of official prices of Diesel available on the official website of 'Petroleum Planning and Analysis cell' under Ministry of Petroleum and Natural Gas for Delhi, Kolkata, Mumbai &Chennai, for the base period
- F_Q The average of official prices of Diesel available on the official website of 'Petroleum Planning and Analysis cell' under Ministry of Petroleum and Natural Gas for Delhi, Kolkata, Mumbai &Chennai, for the 3 months of the quarter under consideration
- E_B Index number of Monthly Whole Sale Price Index for the category 'Explosive' of (g). Manufacture of other chemical products under (J) MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS, published by Office of Economic Adviser, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the base period.
- E_Q Index number of Monthly Whole Sale Price Index for the category 'Explosive' of (g). Manufacture of other chemical products under (J) MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS, published by Office of Economic Adviser, Govt. of India, Govt. of India, Ministry of Commerce & Industry, Department of Industrial Policy & Promotion (DIPP), for the average price index of 3 months of the quarter under consideration.
- PM_B Index Number of Wholesale Prices in India by Groups and Sub Groups (Averages) for 'Manufacture of machinery for mining, quarrying and construction'- published in RBI (Reserve Bank of India) Bulletin, for the base period.
- PM_Q Index Number of Wholesale Prices in India by Groups and Sub Groups (Averages) for 'Manufacture of machinery for mining, quarrying and construction'— published in RBI (Reserve Bank of India) Bulletin, for the average price index of 3 months of the quarter under consideration.
- S_B The average rate provided by the Joint Plant Committee for the relevant category of steel item as mentioned in Clause 46A.9; for the base period.
- S_Q The average rate provided by the Joint Plant Committee for the relevant category of steel item as mentioned in Clause 46A.9; for the 3 months of the quarter under consideration.
- C_B Index No. of Wholesale Price Index of sub-group Cement, Lime & Plaster as published in RBI Bulletin for the base period
- C_Q No. of Wholesale Price Index of sub-group Cement, Lime & Plaster as publishedin RBI Bulletin for the average price index of the 3 months of the quarter under consideration

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Note:--

- A) The demands for escalation of cost shall be allowed on the basis of provisional indices as mentioned in the formulae in clause 17.8.6 above. Any adjustment needed to be done based on the finally published indices shall be made as and when they become available.
- B) Relevant categories of steel for the purpose of operating Price Variation formula as mentioned in this Clause shall be as under:

| SL | Classification | Rates to be used for calculating |
|----|--|--|
| | 1347 | S_Q or S_B |
| 1. | Reinforcement bars | Average of per tonne rates of 10mm dia TMT |
| | and other rounds | & 25mm dia TMT; confirming IS1786; Fe |
| | | 500 |
| 2. | All types and sizes of angles, channels and joists | Average of per tonne rates of 'Angle 75x75x6mm, Mild Steel Plate 10mm thickness and Channel 150x75mm; confirming IS2062, E250 Gr "A" |
| 3. | All types and sizes of plates | Average of per tonne rates of 'MS Plates 10mm thickness and 25mm thickness; |
| | | confirming IS2062, E250 Gr "A" |
| 4. | Any other section of steel not covered in the above categories | Average of price for the 3 categories covered under SL 1, 2 & 3 in this table. |

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

| SL | City | Railway |
|----|---------|--|
| 1. | Delhi | Northern , North Central, North Eastern, North Western |
| 2. | Kolkata | Eastern, East Central, East Coast, Northeast Frontier, South Eastern, Southeast Central |
| 3. | Mumbai | Central, Western, West Central |
| 4. | Chennai | Southern, South Central & South Western |

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21.5.1 ¹⁹(Amended, in case G1 is to be made operational)

Within a period of 45 (forty-five) days after Termination under Clause 21.1, 21.2 or 21.3, as the case may be, has taken effect, the Authority Engineer shall proceed in accordance with Clause 16.5 to determine as follows the valuation of unpaid Works (the "Valuation of Unpaid Works"):

- (a) value of the completed stage of the Works under schedule G or/and as per actual execution of items as specified for works under schedule G1, less payments already made; and
- (b) reasonable value of the partially completed stages of works as on the date of Termination, only if such works conform with the Specifications and Standards.

and shall adjust from the sum thereof (i) any other amounts payable or recoverable, as the case may be, in accordance with the provisions of this Agreement; and (ii) all taxes due to be deducted at source.

Schedule-G, Item No. 1.1 ²⁰(Amended, in case G1 is to be made operational)

The Contract Price for this **schedule of** Agreement is Rs. *****. [It is assigned for different components of the Railway Project as follows:]

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^{19 & 20} Serially numbered footnotes in this separate BOQ items of Agreement are for guidance of the Authority and should be omitted from the draft EPC Agreement forming part of Bid Documents

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