

Abhay Kumar  
अभय कुमार  
Director/B&S/CB-II  
निदेशक /पुल एवं संरचना / सी बी-II



भारत सरकार-रेलमंत्रालय  
अनुसंधान अभिकल्प और मानक संगठन  
लखनऊ - 226011  
Government of India - Ministry of Railways  
Research Designs & Standards Organization  
Lucknow - 226011  
Rly : 032-42124 Fax : 0522-2465706  
Email : [dbs2rdsco@gmail.com](mailto:dbs2rdsco@gmail.com)

No. CBS/Codes/A&C

Dated 04.10.2019

**Principal Chief Engineer:**


- |   |   |
|---|---|
| 1. Central Railway, Mumbai CST - 400 001                    | 9. North Western Railway, Jaipur - 302 001                      |
| 2. Eastern Railway, Fairlie Place, Kolkata - 700 001        | 10. Southern Railway, Park Town, Chennai - 600 003              |
| 3. East Central Railway, Hazipur - 844 101                  | 11. South Central Railway, Rail Nilayam, Secunderabad - 500 371 |
| 4. East Coast Railway, Bhubaneshwar - 751 016               | 12. South East Central Railway, Bilaspur - 495 004              |
| 5. Northern Railway, Baroda House, New Delhi - 110 001      | 13. South Eastern Railway, Garden Reach, Kolkata - 700 043      |
| 6. North Central Railway, Allahabad - 211 001               | 14. South West Railway, Hubli - 580 023                         |
| 7. North Eastern Railway, Gorakhpur - 273 001               | 15. Western Railway, Mumbai - 400 020                           |
| 8. Northeast Frontier Railway, Maligaon, Guwahati - 781 061 | 16. West Central Railway, Jabalpur - 482 001                    |

Sub : A&C Slip no. 5 to IRS Bridge Sub-Structures & Foundation Code.

- Ref : 1. Railway Board letter No. 2017/37/CE-III/BR/BSC/85/Seminar, Dated 03.10.2019.  
2. Railway Board letter No. 2017/37/CE-III/BR/BSC/85/Seminar, Dated 01.10.2019.  
3. Railway Board letter No. 2017/37/CE-III/BR/BSC/85/Seminar, Dated 30.07.2019.  
4. Railway Board order on item No. 934 of 84<sup>th</sup> BSC vides letter No. 2016/4/CE-III/BR/BSC/84/Seminar, dated 21.03.2017.

In terms of reference 1 above an Addendum & Corrigendum Slip No: 5 to IRS : CODE OF PRACTICE FOR THE DESIGN OF SUB-STRUCTURES & FOUNDATIONS OF BRIDGES (Revision - 2013) regarding "Permissible Stresses in Masonry Arches" is enclosed for information and necessary action please.

DA: - As above. (1 page)

  
(Abhay Kumar)  
Director/B&S/CB-II  
For ED/structures/RDSO

**Copy to:**

**(A)**

1. OSD/ME for kind information of Member Engineering, Railway Board, Rail Bhawan, New Delhi - 110001
2. Chief Commissioner of Railway Safety, N.E. Railway Office Compound, Ashok Marg, Lucknow - 226002.
3. Additional Member (Civil Engg.) Railway Board, Rail Bhawan, New Delhi - 110001
4. Additional Member (Works) Railway Board, Rail Bhawan, New Delhi - 110001
5. Advisor (Bridges) Railway Board, Rail Bhawan, New Delhi -110001
6. Director, Indian Railway Institute of Civil Engg., Pune - 411 001
7. Executive Director Civil Engg./B&S, Railway Board, Rail Bhawan, Room No.140A, New Delhi - 110001
8. General Manager (C), N. F. Railway, Maligaon, Guwahati - 781001
9. The Director General, National Academy of Indian Railways, Vadodara - 390004
10. Chief Engineer, Metro Railway, Jawaharlal Nehru Road, Kolkata – 700071
11. ED/B&S/RDSO, B&S Directorate, RDSO,2nd Floor, Annexe - II Building, Manak Nagar, Lucknow, Pin - 226011 (UP)

**(B)**

**The Chief Administrative Officer (Construction):**

1. Central Railway, Mumbai CST - 400 001
2. Eastern Railway, Fairlie Place, Kolkata - 700 001
3. East Central Railway, Mahendrughat, Patna (Bihar) - 800 004
4. East Coast Railway, Bhubaneswar, (Orissa) - 751 016
5. Northern Railway, Kashmere Gate, Delhi - 110 006
6. USBRL Project, Northern Railway, Satyam Complex, Trikuta Nagar Extn., Jammu - 180 020
7. North Central Railway, Allahabad, (U.P.) - 211 001
8. North Eastern Railway, Gorakhpur - 273 001
9. North Western Railway, Jaipur, (Rajasthan) - 302 001
10. Southern Railway, Egmore, Chennai – 600008
11. South Central Railway, DRM/Secunderabad Office Compound, Secunderabad -500 371
12. South Eastern Railway, Garden Reach, Kolkata – 700043
13. South East Central Railway, Bilaspur - 495 004
14. South Western Railway, No. 18 Miller Road, Bangalore, (Karnataka) – 560046
15. Western Railway, Mumbai - 400 020
16. West Central Railway, Jabalpur (M.P.) - 482 001
17. CAO/ERS, Southern Railway, Ernakulam, Kerala – 682506

**(C)**

**Chief Bridge Engineers:**

1. Central Railway, Mumbai CST- 400 001
2. Eastern Railway, Fairlie Place, Kolkata - 700 001
3. East Central Railway, Hazipur - 844 101
4. East Coast Railway, Bhubaneshwar - 751 016
5. Northern Railway, Baroda House, New Delhi - 110 001
6. North Central Railway, Allahabad - 211 001
7. North Eastern Railway, Gorakhpur - 273 001
8. Northeast Frontier Railway, Maligaon, Guwahati - 781 061
9. North Western Railway, Jaipur - 302 001
10. Southern Railway, Park Town, Chennai - 600 003
11. South Central Railway, Rail Nilayam, Secunderabad - 500 371

12. South East Central Railway, Bilaspur - 495 004
13. South Eastern Railway, Garden Reach, Kolkata-700 043
14. South West Railway, Hubli - 580 023
15. Western Railway, Mumbai - 400 020
16. West Central Railway, Jabalpur - 482 001

(D)

**Commissioner of Railway Safety:**

1. Central Circle, 2nd Floor, Churchgate Station Building Mumbai - 400020
2. Eastern Circle, Multistoreyed Building of Eastern Railway, 12th Floor, Strand Road, Kolkata - 700001
3. Northern Circle, near Centre for Railway Information System, Safdarjung Railway Station, New Delhi - 110021
4. North Eastern Circle, DRM Compound, Northern Railway, Hazratganj, Lucknow - 226001
5. Northeast Frontier Circle, 12 Strand Road, Multistoreyed Building of Eastern Railway, Kolkata - 700001
6. Southern Circle, 7 Seshadri Road, Gandhi Nagar, Bangalore - 560009
7. South Central Circle, Opp. Rail Nilayam, Sarojini Devi Road, Secunderabad - 500 071
8. South Eastern Circle, 14 Strand Road, Multistoreyed Building of Eastern Railway, Kolkata-700001
9. Western Circle, 2nd Floor, Churchgate Station Building Annexe, Maharishi Karve Road, Mumbai-400020.

(E)

**Railway PSUs & Others:**

1. The Managing Director, RITES LTD, RITES Bhawan, Plot No.1, Sect.29, Gurgaon (Haryana) - 122001
2. The Managing Director, IRCON, Palika Bhawan, Sector-XIII, R.K. Puram, New Delhi - 110066
3. The Chairman & Managing Director, Konkan Railway Corporation Ltd., Belapur Bhawan, Plot No. 6, Sector-II CBD Belapur, Navi Mumbai - 400 614
4. The Managing Director, Rail Vikas Nigam Ltd., 1st floor, August Kranti Bhawan, Bhikaji Coma Place, Africa Road, R.K. Puram, New Delhi - 110 016
5. The Managing Director, DFCCIL, 5th Floor, Pragati Maidan, Metro Station Building Complex New Delhi - 110001
6. The General Manager, Delhi Metro Rail Corporation Ltd., NBCC Place, Bhisma Pitamah Marg, Pragati Vihar, New Delhi - 110003



(Abhay Kumar)  
Director/B&S/CB-II  
For ED/structures/RDSO



GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS

INDIAN RAILWAY STANDARD

CODE OF PRACTICE FOR THE DESIGN OF SUB-STRUCTURES & FOUNDATIONS OF BRIDGES

(Bridge Sub-Structures & Foundation Code)

FIRST ADOPTED- 1936  
FIRST REVISION-1985  
SECOND REVISION-2013

ADDENDUM & CORRIGENDUM SLIP No. 5 DATED 04.10.2019

1. Add following at the end of the Clause 5.14.3:  
**"Note: These provisions are applicable for Masonry Arches also".**
2. Heading of Clause 5.16.2.2 to be modified as under:  
**Replace "Criteria For Masonry Abutments /Piers" by "Criteria For Masonry Abutments /Piers/Arches".**
3. Existing Note of Clause 5.16.2.2 to be modified as under:-


Existing	Modified
Note: If maximum tensile stress exceeds by more than 100% of the values as contemplated in IRS Bridge Substructure Code vide clause 5.14.3 & 5.14.4, tensile zone shall be neglected and equivalent compressive stress shall be worked out.	Note: If maximum tensile stress exceeds by more than 100% of the values as contemplated in IRS Bridge Substructure Code vide clause 5.14.3 & 5.14.4, tensile zone shall be neglected and equivalent compressive stress shall be worked out. <b>However, no overstress in tension shall be permitted in case of Arches.</b>

4. Heading of Clause 5.16.2.3 to be modified as under:  
**Replace "Criteria for Mass Concrete Abutments/Piers" by "Criteria for Mass Concrete Abutments/Piers/Arches".**
5. Existing Note of Clause 5.16.2.3 to be modified as under:-

Existing	Modified
Note: If maximum tensile stress exceeds by more than 100% of the values, as contemplated in IRS Concrete Bridge Code, tensile zone shall be neglected and equivalent compressive stress shall be worked out.	Note: If maximum tensile stress exceeds by more than 100% of the values, as contemplated in IRS Concrete Bridge Code, tensile zone shall be neglected and equivalent compressive stress shall be worked out. <b>However, no overstress in tension shall be permitted in case of Arches.</b>

BY ORDER:

LUCKNOW  
Dated: 04.10.2019

  
(V. K. Srivastava)  
Executive Director/Structures  
B&S Directorate  
R.D.S.O.