

Abhay Kumar
अभय कुमार
Director/B&S/CB-II
निदेशक/पुल एवं संरचना/सी0बी0-2



भारत सरकार – रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ – 226011
Government of India-Ministry of Railways
Research Designs & Standards Organisation
Lucknow- 226011
Rly. : 032-42124 Phone / Fax : 0522-2465706
Email : dbs2rds0@gmail.com

No. CBS/PSBC

Dated: 11.11.2019

Principal Chief Engineer:

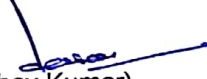
1. Central Railway, Mumbai CST - 400 001
2. Eastern Railway, Fairlie Place, Kolkata - 700 001
3. East Central Railway, Hazipur - 844 101
4. East Coast Railway, Bhubaneshwar - 751 016
5. Northern Railway, Baroda House, New Delhi - 110 001
6. North Central Railway, Allahabad - 211 001
7. North Eastern 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

Sub: Addendum & Corrigendum Slip No. 7 to IRS Bridge Sub-Structures and Foundation Code (Second Revision-2013)

Ref.: Railway Board's letter No. 2015/CE-III/BR/Sub-Structure Code
Dated:07.11.2019

In terms of above reference, an Addendum & Corrigendum Slip No. 7 to IRS Bridge Sub-Structures and Foundation Code (Second Revision-2013) regarding replacement of clause 5.10 is enclosed for information and necessary action please.

Encl: As above.


(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:

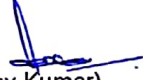
1. Central Railway, Mumbai CST- 400 001
2. Eastern Railway, Fairlie Place, Kolkata - 700 001
3. East Central Railway, Hazipur - 844 101
4. East Coast Railway, Bhubaneshwar - 751 016
5. Northern Railway, Baroda House, New Delhi - 110 001
6. North Central Railway, Allahabad - 211 001
7. North Eastern Railway, 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 Bhavan, 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
(Railway Board)

**INDIAN RAILWAY STANDARD
CODE OF PRACTICE FOR THE DESIGN OF SUB-STRUCTURES AND
FOUNDATIONS OF BRIDGES**

(BRIDGE SUB-STRUCTURES & FOUNDATION CODE)

ADOPTED-1936
FIRST REVISION-1985
SECOND REVISION-2013

Addendum & Corrigendum Slip No. 7 dated 11.11.2019

5.10 BUOYANCY EFFECT (B)

5.10.1 Full buoyancy shall be considered upto HFL or LWL, as the case may be, depending upon the most critical combination, irrespective of the soil type. However, if foundations are resting on rock and have adequate bond with it, suitable reduction in buoyancy may be considered at the discretion of Engineer responsible for design but in any case the reduction shall not be less than 50% of full buoyancy.


5.10.1.1 **Checking stability against overturning:** The effect of buoyancy upto HFL, as indicated in clause 5.10.1, shall be considered in the design to check the stability of the bridge foundations against any possible combination of forces.

5.10.1.2 **Calculations of foundation pressure:** In case of foundations of bridges where water perennially present, buoyancy effect shall be considered as per Clause 5.10.1 for LWL and also for HFL. Where water flow is not perennial, buoyancy effect shall be considered with respect to lowest level for water table and HFL.

5.10.2 **Design of submerged masonry / concrete structure:** In the design of submerged masonry or concrete structure the reduction in buoyancy through pore pressure may be limited to 15% of the full buoyancy.

BY ORDER

LUCKNOW
Dated: 11.11.2019


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