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NE Railway
Gorakhpur
W/29/0/A/5
15.07.2014

Bridge Circular No. 15

The Divisional Railway Manager (Engg)
N.E.Railway,
Izzatnagar, Lucknow, Varanasi

The Chief Workshop Manager/Bridge
N.E.Railway
Gorakhpur

Sub: Temporary speed restriction in connection with Bridge Works.

1.0 To progress number of bridge works simultaneously within the available Engineering time allowance (ETA), it is necessary to avoid stop dead restriction. RDSO has issued sleeper crib as well as CC crib type plans. Use of such cribs permits up to 30 kmph speed restriction.

2.0 Non-stop speed restriction may be permitted provided conditions given in para 3 onwards hereunder, are satisfied and the concerned officer attaches the following certificate with the application sent to CRS for obtaining his sanction.

"I certify that the safety precautions as laid in CE's Bridge Circular No.15 dated 15.07.2014 will be complied with before opening the temporary works for traffic. "

Sr. DEN/DEN/Dy.CE(CON)

3.0 Precautions to be taken on temporary works:

3.1 A responsible supervisor, conversant with the track work will be assigned the duty by name to maintain temporary works. He will examine the track and the temporary arrangements including the temporary cribs regularly. He will take such remedial measures as are warranted to ensure safety. Regular check/ maintenance is invariably required initially for 10 days, after opening of the temporary arrangements.

3.2 The work will normally be undertaken during the non-monsoon period between 15th Oct. & 15th June.

3.3 In case it becomes necessary to continue the work during the monsoon period, stop -dead restriction will be imposed as per site condition.

3.4 A strict watch will be kept to ensure that the drivers do not exceed the speed restriction imposed. Over-speeding should be promptly brought to the notice of the Divisional Mechanical Engineer and the Loco foreman.

3.5 In case of repeated failure of the drivers to control speed, the Divisional Railway Manager will take up with Drivers under D&AR.

3.6 The track should be kept well-packed with ballast, sand and cinder. Adequate quantity of packing material should be available at site when the work is in progress.

3.7 In case of sudden outburst or unexpected rains, the P.Way Mistry or the PWI will check the position immediately and take suitable safety measures to avoid any accident.

4.0 **Semi-permanent diversions:**

4.1 For the first 24 hrs after the opening the diversion, the speed restriction will be stop-dead and 10 kmph. Thereafter the restriction will be relaxed to non stop 20 kmph by ADEN/AXEN/XEN, after satisfying himself that the diversion embankment is consolidated and stable and there has been no settlement during passage of last train.

4.2 Other conditions for such non-stop restriction which are to be satisfied will be as laid down in para 712 IRPWM and as under:

- | | | |
|----------------------------------|---|--|
| (i) Type of Sleeper | : | Wooden, steel trough or PSC. |
| (ii) Sleeper density | : | Minimum M+4 |
| (iii) Rail Section | : | Minimum 90 R for B.G.
50 R for M.G. |
| (iv) Minimum Radius of curves | : | BG- 450 metres
MG- 300 metres |
| (v) Straight bet. reverse curves | : | Minimum 30M |
| (vi) Gradient on the diversion | : | Not steeper than 1 in 150.
This will look after curve
compensation also. |
| (vii) Minimum Waterways | : | Sufficient to carry dry weather
flow. |

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5.0 Use of Temporary spans:

5.1 Speed restriction of stop-dead and 10kmph will be observed for first 24 hrs. Thereafter the speed will be relaxed to non-stop 20 kmph by the ADEN/AXEN/ XEN in charge, after inspection of bridges and making sure that approaches are consolidated and stable & there has been no settlement during passage of last train.

5.2 Sleeper crib/CC crib will be provided as per type plans issued from time to time. Reference of type plan will be given in the Temporary Arrangement Drawing of the bridge.

5.3 Temporary span will be provided as per type plans issued from time to time. Reference of type plan will be given in the Temporary Arrangement Drawing of the bridge.

6.0 Changing of bed block using rail clusters:

Normal speed restriction in all such cases shall be stop-dead and 10kmph, unless specific plan is approved by Headquarters.

7.0 Regrading under traffic :

7.1 Speed restriction for such works will be 20 kmph. This will be relaxed in stages as per para 233 of IRPWM.

7.2 Level pegs shall be fixed at 50m interval before lifting is commenced.

7.3 Lifting will not exceed 50 mm at a time.

7.4 The easement gradient for passage of train will not be steeper than 25mm per rail length of 13m.

7.5 The next round of raising shall be started only after the previous layer has attained proper consolidation to avoid any dangerous settlement under traffic,

7.6 The operation will be repeated till the required level is attained. Thereafter the track will be finally ballasted, through packed and boxed. The profile will be made up to proper level and embankment given 2 Horizontal to 1 vertical slope.

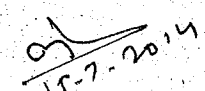
7.7 The lifting work shall be done as per Para No. 233 of IRPWM.

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7.8 Lifting shall be done with good, coarse grained soils classified as per IS 1498 & preferably falling within the enveloping curves of blanketing material as per "Guide lines for Earthwork in Railway Projects" issued by RDSO in July'03 with latest correction slips. The earth work in embankment of the diversion will also be done as per these RDSO's guidelines.

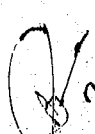
7.9 Raising in excess of 600mm shall not be done under traffic, unless special hand rammers are used and scheme of compaction is approved by Headquarter.

(This circular supersedes Bridge circular no 5 of 1989 edition)


15-7-2014
(D K Singh)
Chief Bridge Engineer

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