

URGENT

East Central Railway

**Office of the
General Manager
(Signal & Telecomm)
ECR, Hajipur**

**No. ECR-HQ0SnT (CCP)/2/2024
(Comp.no. 279039)**

Dated: 05.12.2024

**CSTE/Con./North & South/MHX,
Sr. DSTEs/
DDU, DHN, DNR, SEE & SPJ,
East Central Railway**


Sub: Modification in design of Signal foundations provided between two tracks for compliance to provision of SOD.

Ref: ED/Sig/Dev./RB Letter no. 2021/Sig/G/9/RDSO dated 04.12.2024(Copy enclosed.)

Vide above reference, Railway board has asked feedback in connection with Modification in design of Signal foundations provided between two tracks vide RDSO's drawing no. RDSO/M-00011/R under above referred RB letter for compliance to provision of SOD.

Therefore, all units are requested to submit their feedback latest by 06.12.2024 on above subjected matter treating this urgent. So, that ECR feedback can be submitted to Railway Board in time.

DA : As above.


(D.K.Chand)
Dy.CSTE/Signal/HJP
for GM (S&T)/ECR/HJP

URGENT

(भारत सरकार) GOVERNMENT OF INDIA
(रेल मंत्रालय) MINISTRY OF RAILWAYS
(रेलवे बोर्ड) RAILWAY BOARD

No. 2021/Sig/G/9/RDSO

New Delhi, Date: .12.2024

**The PCSTEs
All Indian Railways**

Sub: Modification in design of Siganl foundations provided between two tracks for compliance to provision of SOD.

Ref: RDSO letter no. SIG/SOD/Vol-III dtd. 19.12.2018 (copy encl.)

RDSO had issued modified signal foundation drawing no. RDSO/M-00011/R4 vide reference letter.

Zonal Railways are requested to submit feedback in this connection to Board's office latest by 09.12.2024.

Matter may be treated as **urgent**.

Shyam Kumar Verma
Digitally signed by
Shyam Kumar Verma
Date: 2024.12.04
18:11:38 +05'30'

(श्याम वर्मा)/Shyam Verma
कार्यकारी निदेशक(सिग्नल/विकास)
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Government of India - Ministry of Railways
Research Designs & Standards Organisation
LUCKNOW - 226011

Room No. 206A, IInd Floor,
Signal Directorate, Annexe-I Building,
Manak Nagar, LUCKNOW - 226011

No. STG/SOD/Vol-III

Date:17.12.2018

To,

Mailing address overleaf.

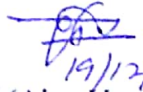
Sub: Modification in design of Signal foundations provided between two tracks for compliance to provision of SOD.

Ref: Railway Board letter No. 2011/Sig/SOD/1 New Delhi dated 17.12.2018(enclosed).

Various references were received from Zonal Railway/PSUs to sort out issue of signal placement in between the track in accordance with IRSOD-2004 where track centre cannot be increased beyond 5300mm. As per IRSOD-2004, minimum horizontal distance of any structure from centre of track shall be 2360mm in between formation level to rail level. Existing signal foundation being used by Zonal Railway are having width more than 580mm (5300mm-2360mm-2360mm) at formation level making them unsuitable hence a new design of signal foundation is developed in consultation with B&S directorate having a width of 560mm between formation level to rail level and having same strength to the existing signal foundation.

Vide reference above, the tentative drawing of modified Signal foundation (Drg.No. RDSO/M-00011/R4 copy enclosed) has been approved by Railway Board for trials for location in between track where SOD clearance is limited. Feedback over this foundation drawing may be sent to RDSO so that consolidated report may be sent to Railway board for taking a final view.

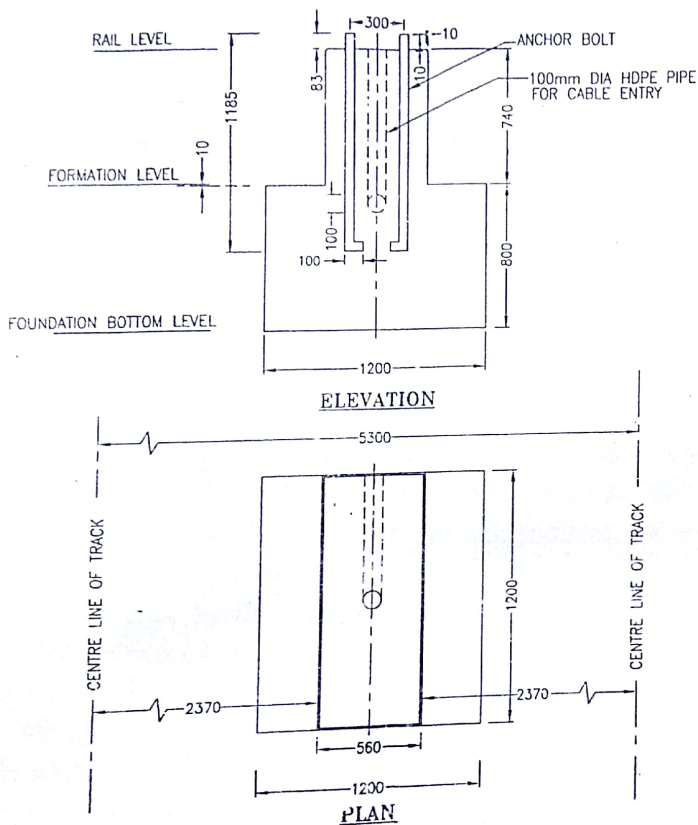
DA: As above


19/12/18
(Ajay Verma)
Director/Signal-II
For Director General /Signal

The Principal Chief Signal & Telecom Engineer, CSTE/Construction & CSTE/Project

Central Rly., Mumbai, CST - 400001
Western Rly, Churchgate, Mumbai - 400020
Eastern Rly., Fairlie Place, Kolkata -700001
South Eastern Rly., Garden Reach, Kolkata - 700043
Northern Rly. Baroda House, New Delhi- 110001
North Eastern Rly., Gorakhpur- 273012
North East Frontier Rly., Maligaon, Guwahati - 781011
Southern Rly. Park Town, Chennai - 600003
South Central Rly., Secunderabad – 500371
East Central Railway, Hajipur- 844101
East Coast Railway, B-1, Rail Vihar, Chandrasekharapur, Bhubneshwar - 751023
North Central Railway, Hastings Road, Allahabad -211001
North Western Railway, Jaipur - 300206
South Western Railway, Club Road, Keshavapur, Hubli - 580023.
West Central Railway, OSD Office, Jabalpur - 482001
South East Central Railway, R.E. Office Complex, Bilaspur – 495004
CORE, Nawab Yusuf Ali Road,Civil Lines,Allahabad-211001
Metro Railway, 33/1, Jawaharlal Nehru Road, Kolkata - 700071.
Mumbai Rail Vikas Corporation, IInd Floor Churchgate Station Building Mumbai-400020.
Delhi Metro Rail Corporation, 3 rd Floor, NBCC Place, Bhismapitamah Marg, New Delhi-110113.
Konkan Railway Corpn.Ltd. Belapur Bhawan, Sector-II, CBD, Belapur, New Mumbai-400614.

Director IRISSET, Tarnaka Road, Lalaguda, G.O. Secunderabad - 500017
MD, DFCCIL 5 th Floor Pragati Maidan Metro Station Building Complex New Delhi-110001
PED Rail Vikas Nigam Limited, First Floor August kranti Bhavan, Bhikaji Cama Place, New Delhi-110016
CAO, IRPMU, Shivaji Bridge, Connaught Circus, New Delhi, Delhi 110001
The General Manager /S&T, RITES, RITES Bhavan, 5 th Floor, Plot-1, Sector-29 Gurgaon-122001
The General Manager /S&T, IRCON, Palika Bhavan, Sector XIII. R.K.Puram, New Delhi-110066.
CMD, Railtel Tower Corporate office Plot No.143 Setor-44, Gurugram-122003.
The Secretary (Signal), Railway Board, Rail Bhavan, New Delhi for kind information please.
ED/QA/S&T, RDSO, Lucknow for kind information please.
ED/Structure, RDSO, Lucknow for kind information please.

**NOTES:**

1. CASTING OF BOLTS TO BE DONE IN THE CONCRETE BASE DULY TAKING THE MEASUREMENTS OF THE SURFACE BASE AND CIRCLE ALSO ALIGNING THE FOUR HOLES OF THE SURFACE BASE WITH BOLT LOCATIONS BY PROVING TEMPLATE.
2. 100mm DIA. HDPE PIPE TO BE EMBEDDED DURING CASTING ITSELF.
3. AFTER CASTING OF BASE AND CURING OF THE SAME IS OVER, THE FOUR SIDES OF THE BASE TO BE CLEARED OF ALL LEFT OVER CONCRETE AND SIDES TO BE FILLED WITH SUITABLE SOIL AND DULY COMPACTED IN LAYERS UPTO FORMATION LEVEL.
4. WHERE REQUIRED PITCHING ON THE RELEVANT SIDES OF THE RAMMED SURFACE WITH 225 TO 300mm SIZE BOULDERS SHALL BE DONE & FILLING THE CREVICES WITH 1:6:12 CONCRETE WITH FINE 20mm STONE CHIPS. PITCHING WILL BE UPTO THE FULL HEIGHT OF THE RAMMED EARTH.
5. CABLE GROOVE IS TO BE FILLED UP WITH SAND & COVERED FLUSH WITH SIDE OF THE FOUNDATION BY A LAYER OF 25mm THICK CEMENT PLASTER AFTER LAYING OF CABLE AND ERECTION OF SIGNAL POST.
6. THIS DRAWING OF MASS CONCRETE FOOTING IS SUITABLE FOR SUPPORTING MAIN LINE SIGNAL POST AS PER SIGNAL DIRECTORATE/RDSO'S TENTATIVE DRAWING NO. SDO/S&T/SIGNAL POST/002 AND FURTHER REQUIREMENTS, PROVIDED VIDE NOTE NO. STG/SOD/VOL-III DATED 29-11-17 & 05-11-2018.
7. THE DESIGN IS SUITABLE FOR OVERALL HEIGHT OF MAIN LINE SIGNAL POST UP TO 5.6M ABOVE BOTTOM OF SIGNAL BASE WITH ROUTE INDICATOR HAVING SIX ARMS. DIAMETER OF SIGNAL POST HAS BEEN TAKEN AS 0.14M IN THE DESIGN. LOADS HAVE BEEN TAKEN AS PER S&T NOTE NO. STG/SOD/VOL-III DATED 29.11.2017 OF SIGNAL DIRECTORATE
8. UNIT WEIGHT OF CONCRETE HAS BEEN TAKEN AS 24 KN/M³ AS PER CLAUSE 5.2 OF IRS BRIDGE SUBSTRUCTURES & FOUNDATION CODE.
9. CONCRETE GRADE OF MCC FOR FOOTING HAS BEEN TAKEN M-20 FOR SEVERE ENVIRONMENT EXPOSURE CONDITION AS SPECIFIED IN CLAUSE 5.4.4 OF IRS CONCRETE BRIDGE CODE.
10. MINIMUM SAFE BEARING CAPACITY OF SOIL HAS BEEN TAKEN AS 150KN/M².
11. THE FOUNDATION IS SUITABLE FOR BASIC WIND SPEED UPTO 47m/s.
12. IT HAS BEEN ASSUMED THAT NO OTHER HORIZONTAL FORCE IS BEING APPLIED EXCEPT WIND FORCE.
13. THIS DRAWING HAS BEEN PREPARED IN CONSULTATION WITH SIGNAL DIRECTORATE/RDSO AND AS PER REQUIREMENTS OF SIGNAL DIRECTORATE IN REFERENCE TO ED/Sig-1/RAILWAY BOARD LETTER NO. 2011/Sig/SOD/1 NEW DELHI DATED 17.11.2016.
14. THIS DRAWING SUPERSEDES EARLIER DRAWING NO RDSO/M-00011/R3/1,2 AND 3 DATED 06.12.2017.
15. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.

THIS DRAWING IS THE PROPERTY OF
RESEARCH DESIGN & STANDARDS ORGANISATION
(MINISTRY OF RAILWAYS, GOVERNMENT OF INDIA)
AND SHALL NOT BE USED, COPIED OR REPRODUCED IN
PART OR WHOLE WITHOUT PRIOR CONSENT IN WRITING

R. D. S. O.

FOOTING FOR MAIN LINE SIGNAL POST
FOR OVERALL HEIGHT UPTO 5.6M WITH
ROUTE INDICATOR HAVING SIX ARMS

PROVISIONAL DATE-12.11.2018

RDSO/M-00011/R4

MILLIMETERS

200 0 200 400 600 800

1:20

SCALE ALT. DESCRIPTION DATE

NOTES

CALCULATION REGISTER No. CB-8/54/R4	DRAWN BY-ANJANA BHASIN (SSC)	SCRUTINISED & CHECKED BY DO/B&S/CB-II	SCRUTINISED & RECOMMENDED BY DIRECTOR/B&S-VII	SCRUTINISED & RECOMMENDED BY DIRECTOR/SIGNAL-II	RECOMMENDED BY ED/SIGNAL-II	APPROVED BY ED/STRUCTURES	FILE No. CB/S/MSC/ROD/ST
PAGES DESIGN BY-SHREYA SUMAN (SSC)	CHECKED BY-SHREYA SUMAN (SSC)						NOTING PAGE No.
CHECKED BY-BHAW KUMAR (SSC)							

(भारत सरकार) GOVERNMENT OF INDIA
(रेल मंत्रालय) MINISTRY OF RAILWAYS
(रेलवे बोर्ड) RAILWAY BOARD

No. 2011/Sig/SOD/1

New Delhi, dated 17.12.2018

The ED/Sig (Co-ordination),
RDSO,
Lucknow.

Sub: Modification in design of signal foundations provided
between two tracks for compliance to provision of SOD.

Ref: Your letter No. STG/SOD/Vol-II dt 15/16.11.2018.

Vide the above referred letter, RDSO has proposed main signal foundation as per
Drawing No. RDSO/M-00011/R4.

2. As this revised drawing meets the requirement laid down in SOD. Board (DG/S&T)
has decided that this modified signal foundation design be tried for location in between track
where SOD clearance is limited. Feedback from Railways over this foundation drawing
may be collected in 3-4 months and sent to Railway Board for taking a final view.


(Arjun Singh Tomar)
Director (Signal)
Railway Board
Email : dsig@rb.railnet.gov.in