

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

No. 2011/CE-II/TSC/1

New Delhi, dt. 18.07.2013.

The General Managers (Engg.)-CR, ER, ECR, ECoR, NR, NCR, NER, NFR, NWR, SR, SCR, SER, SECR, SWR, WR, WCR and Metro Railway/Kolkata.

The General Manager (Const.), N.F.Railway, Guwahati.

The General Manager/CORE/Allahabad.

The CAO/Const. All Indian Railways.

FA & CAO, All Indian Railways.

The General Managers (Engg.) – ICF/Chennai, RCF/Kapurthla, DLW/Varanasi, CLW/Chittranjan, Rail Wheel Factory /Yelahanka, Bangalore & DMW/Patiala.

The Director General (Track), RDSO/Alambagh, Lucknow.

Chief Commissioner of Railway Safety, Lucknow.

Managing Director, IRCON, New Delhi.

Managing Director, RITES, New Delhi.

Managing Director, DMRC, Metro Bhawan, Barakhamba lane, New Delhi.

Managing Director, CONCOR, New Delhi.

Managing Director, RVNL, August Kranti Bhawan, Bhikaji Cama Place, New Delhi.

Managing Director, DFCCIL, Pragati Maidan, Metro station, New Delhi.

Managing Director, PIPAVAV Railway Corp. Ltd., 1st Floor Jeeven Tara Building, Gate No.4, Parliament Street, New Delhi.

Managing Director, MRVC, Church Gate station Building 2nd Floor, Mumbai – 400020.

Managing Director, RLDA, IRCON Office Compound, Next to Safdarjang Rly. station, Motibagh-I, New Delhi.

Managing Director, Konkan Railway Corporation Ltd, Belapur Bhawan, Sector-11, CBD Belapur. Mumbai. Pin - 400614.

Director, IRICEN, Pune.

Director, IRIEEN, Nasik.

Director, IRISSET, Secunderabad.

Director, IRIMEE, Jamalpur.

Director, IRITM, Vill. Kanausi, Hardoi, Manik Nagar, Lucknow.

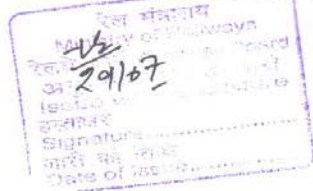
Director General, Railway Staff College, Vadodara.

Genl. Secretaries, AIRF, NFIR, IRPOF, FROA, AIRPFA, DAI (Railways) Rail Bhawan, New Delhi.

Sub: Advance Correction Slip No.134 to the Indian Railways Permanent Way Manual.

Ministry of Railways (Railway Board) has decided that correction/addition as indicated in the enclosed Advance Correction Slip No.134 dated 18.07.2013, to relevant para of the IRPWM, be made.

Receipt of this letter may please be acknowledged.



*Pls
Please issue
29/07/13*

18/7/13
(Pankaj Tyagi)
Director Civil Engg.(P),
Railway Board.

No. 2011/CE-II/TSC/1

New Delhi, dt.18.07.2013.

Copy to :

Sr. PPS/PS to CRB, ME, ML, MS, MM, MT, FC, Secretary.

AM(CE), AM(Works), AM(Budget), AM(Elect.), AM(Fin.), AM(Sig.), AM(Plg.), AM(Staff), AM(Mech.), AM(PU.), AM(Tele.), AM(Traffic), Adv./Project, Adviser(Bridges), Adv.Adv(Vig.), Adv(L&A), Adv(Safety), Adv(Project), AM(Stores), AM(IT), AM(T&C), Adv.(Rates), AM(Comml.).

EDCE(P), EDTK(M), EDTK(MC), EDTK(P), EDCE(G), EDCE(B&S)I, EDCE(B&S)II, ED(L&A)I, ED(L&A)II, ED(L&A)III, ED(Works), EDW(Plg.), EDV(E), ED(Project Monitoring), ED(Safety), EDF(X)I, EDF(X)II, ED/INFRA/Civil.

DTK(MC), DTK(M), DTK(P), DCE(B&S), DCE(B&S)II, Dir(Works)-I, Dir(Works)-II, Dir.Works(Plg.), Dir(L&A), OSD(ME), DVE-I & DVE-II, Dir./TMS, IPWE(I).

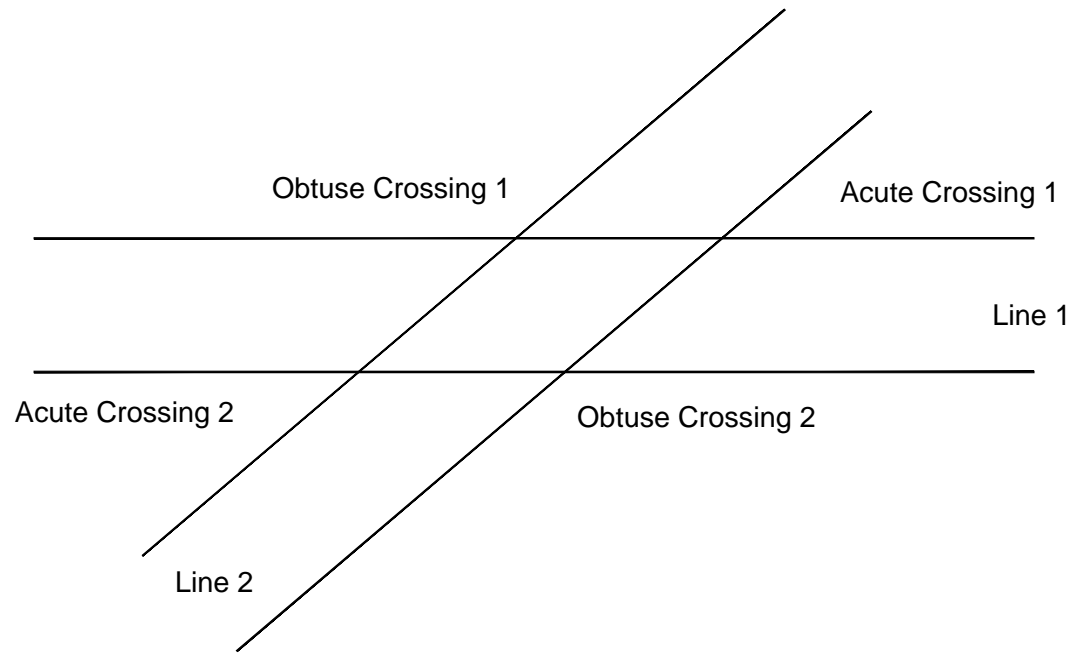
Director/C&IS - for uploading on Railway Board website.

INDIAN RAILWAYS PERMANENT WAY MANUAL
ADVANCE CORRECTION SLIP No.134 dated 18.07.2013

A new annexure-2/6(B),(C) and (D) and annexure-2/6/1 of Para 237(5) regarding proforma for Inspection of Diamond Crossing without Slip/With Single Slip/With Double Slip may be added to Indian Railways Permanent Way Manual.

DIAMOND CROSSING

Annexure-2/6(B), Para 237(5)



PROFORMA FOR INSPECTION OF POINTS AND CROSSINGS

Diamond Crossing

Station	_____
Point No.	_____
Location	_____
Type of rail	_____
Date of laying	_____
Date of laying reconditioned crossings :	_____
Type of sleeper/assembly	_____
Angle of crossing	_____
Nominal gauge of turnout	_____

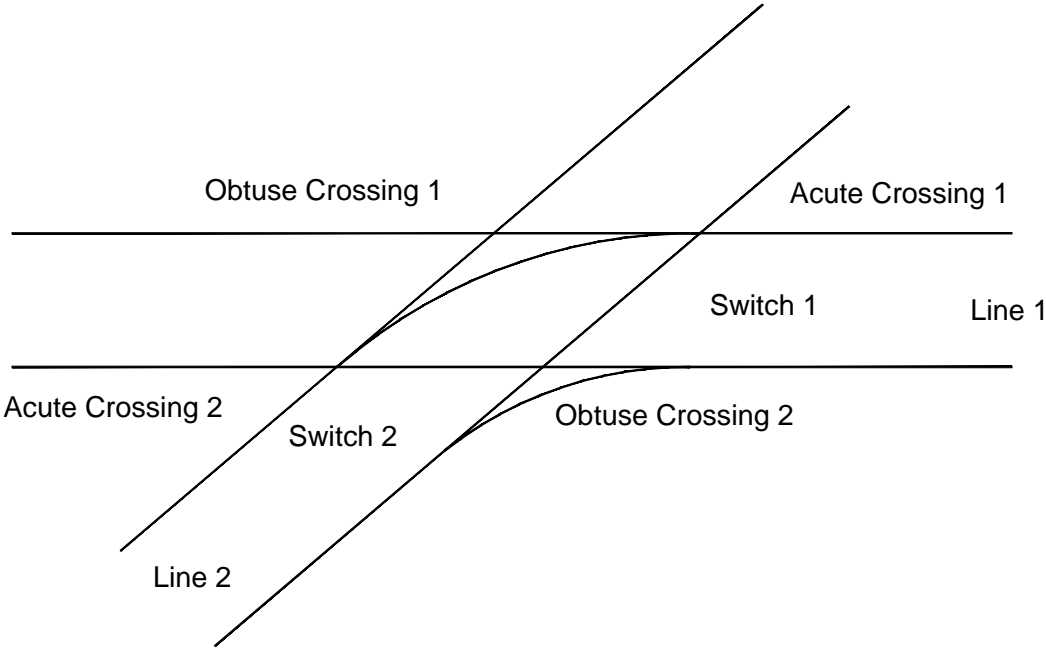
1 Sleeper Details									
1.1	Condition of sleeper								
1.2	Squaring								
1.3	Spacing								
2 Ballast Details									
2.1	Condition of ballast								
2.2	Condition of drainage								
2.3	Ballast in shoulders and cribs								
2.4	Clean ballast cushion (mm)								
3	Gauge and X-level between crossings								
				Line 1		Line 2			
				Gauge	X-Level	Gauge	X-Level		
		Station 0							
		1							
		2							
	At 3 m interval in lead portion	3							

		4								
		5								
4	Condition of Crossing		Acute Xing 1		Acute Xing2		Obtuse Xing 1		Obtuse Xing 2	
4.1	Sign of Propogation of crack (if any)									
4.2	Burring on top surface at nose									
5	Type of Crossing									
6	Wear of Crossing		Acute Xing 1			Acute Xing 2				
			Left Wing Rail	On Nose	Right Wing Rail	Left Wing Rail	On Nose	Right Wing Rail		
			Obtuse Xing 1			Obtuse Xing 2				
			Nose 1		Nose 2		Nose 1		Nose 2	
			On Nose	Wing Rail	On Nose	Wing Rail	On Nose	Wing Rail	On Nose	Wing Rail
7	Clearance of wing rail opposite nose of crossing and upto 450 mm towards heel end		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2	
			Inner	Outer	Inner	Outer	Inner	Outer	Inner	Outer
8	Gauge and Cross Level		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2	
			Line 1	Line 2	Line 1	Line 2	Line 1	Line 2	Line 1	Line 2
8.1	1 m ahead of ANC	Gauge								
		X-Level								
8.2	150 mm ahead ANC	Gauge								
		X-Level								
8.3	150 mm behind ANC	Gauge								
		X-Level								
8.4	1 m behind ANC	Gauge								

		X-Level								
9	Condition of check rail and its fittings		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2	
9.1	Raised Check Rail									
9.2	Other bearing, plates, keys, blocks, bolts and elastic fastening									
10	Check Rail Clearance		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2	
			Inner	Outer	Inner	Outer	Inner	Outer	Inner	Outer
10.1	Opposite ANC									
10.2	500 mm ahead towards toe of crossing									
10.3	500 mm behind heel of crossing									
10.4	At the flared end towards heel									
10.5	At the flared end towards toe									
11	Remarks									

DIAMOND CROSSING: WITH SINGLE SLIP

Annexure-2/6(C) Para 237(5)



PROFORMA FOR INSPECTION OF POINTS AND CROSSINGS

Diamond Crossing: with single slip

Station _____							
Point No. _____							
Location _____							
Type of rail _____							
Date of laying _____							
Date of laying reconditioned crossings : _____							
Date of laying reconditioned switches : _____							
Type of sleeper/assembly _____							
Angle of crossing _____							
Nominal gauge of turnout _____							
1	Sleeper Details						
1.1	Condition of sleepers						
1.2	Squaring						
1.3	Spacing						
2	Ballast Details						
2.1	Condition of ballast						
2.2	Condition of drainage						
2.3	Ballast in shoulders and cribs						
2.4	Clean ballast cushion (mm)						
3	Condition of Switch Assembly		Switch 1	Switch 2			
3.1	Whether chipped or cracked over 200 mm length within 1000 mm from ATS	Inner					
		Outer					
3.2	Whether twisted or bent (causing gap of 5 mm	Inner					

	or more at toe)		Outer							
3.3	Whether knife edge		Inner							
			Outer							
3.4	Seating of tongue rails on slide chairs		Inner							
			Outer							
3.5	Housing of stock and tongue rails		Inner							
			Outer							
3.6	Condition of fitting of switches									
3.7	Packing condition under switch assembly									
4	Creep at toe of switch									
5	Throw of Switch at ATS		Inner							
			Outer							
6	Divergence At Heel Block		Inner							
			Outer							
7	Straightness of Straight (Measured on 10 mt. chord)		Stock Rail							
			Tongue Rail							
8	Wear in Tongue Rail and Stock Rail			Switch 1		Switch 2				
				Inner	Outer	Inner	Outer			
8.1	Tongue Rail	At point with 13 mm head width (as per Annexure 2/6/1)	Vertical							
			Lateral							
8.2	Tongue Rail	At point where tongue rail and stock rail level is same	Vertical							
			Lateral							
8.3	Stock Rail	At point where tongue rail and stock rail level is same	Vertical							
			Lateral							
9	Distance between gauge faces of stock rails at JOH			Switch 1		Switch 2				
10	Distance between web to web of Tongue Rails									
10.1	Leading stretcher bar									

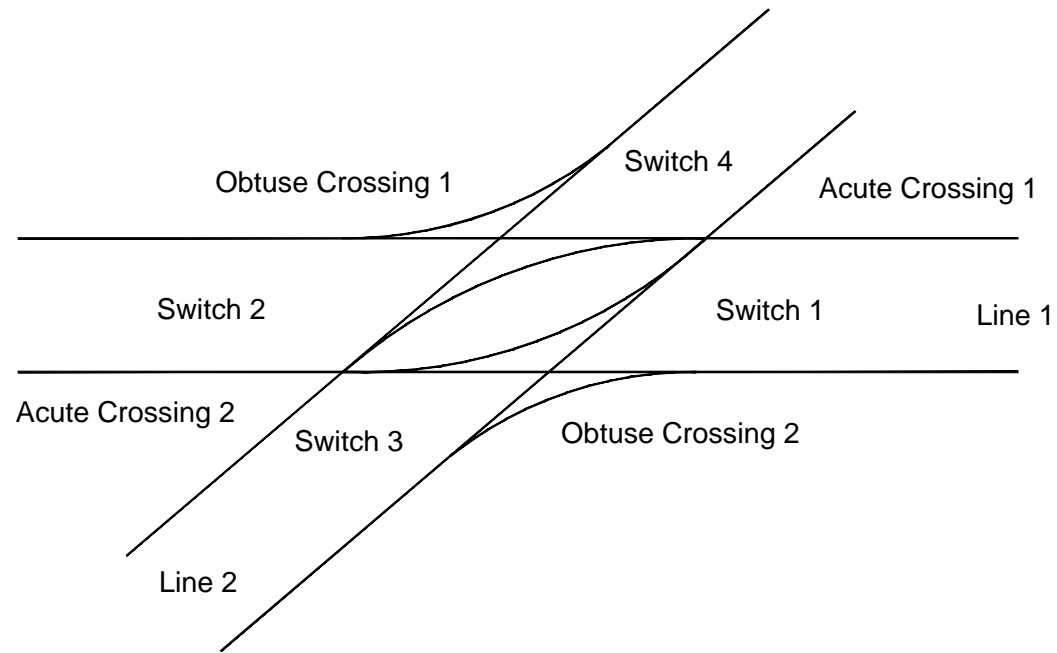
10.2	Ist following stretcher bar								
10.3	IInd following stretcher bar								
11	Gap between top edge of stretcher bar and bottom of rail foot								
11.1	Leading stretcher bar	Inner							
		Outer							
11.2	Ist following stretcher bar	Inner							
		Outer							
11.3	IInd following stretcher bar	Inner							
		Outer							
12	Clearance at JOH								
12.1	On Open tongue rail side	Straight							
		Turnout							
12.2	On Closed tongue rail side	Straight							
		Turnout							
13	Gauge and X-Level in Switch and Lead Portion	Straight Side				Turnout Side			
		Switch 1		Switch 2					
		Gauge	X-Level	Gauge	X-Level	Gauge	X-Level		
13.1	At 450 mm ahead of toe of switch								
13.2	At ATS between the two stock rails								
13.3	At 150 mm behind toe of switch								
13.4	At heel of switch								
13.5	At 3 m interval in lead portion:	Station 0							
		1							
		2							
		3							
		4							
		5							

14	Versine in Switch and Lead Portion		Switch 1 and Switch 2							
			Inner		Outer					
			(Heel/ATS) 0							
			1							
			2							
			3							
			4							
		5								
15	Condition of Crossing		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2	
15.1	Sign of Propogation of crack (if any)									
15.2	Burring on top surface at nose									
16	Type of Crossing									
17	Wear of Crossing		Acute Xing 1				Acute Xing 2			
			Left Wing Rail	On Nose	Right Wing Rail	Left Wing Rail	On Nose	Right Wing Rail		
			Obtuse Xing 1				Obtuse Xing 2			
			Nose 1		Nose 2		Nose 1		Nose 2	
			On Nose	Wing Rail	On Nose	Wing Rail	On Nose	Wing Rail	On Nose	Wing Rail
18	Clearance of wing rail opposite Nose of crossing and upto 450 mm towards heel end		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2	
			Inner	Outer	Inner	Outer	Inner	Outer	Inner	Outer
19	Gauge and Cross Level		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2	
			Straight	Turnout	Straight	Turnout	Straight	Turnout	Straight	Turnout
19.1	1 m ahead of ANC		Gauge							
			X-Level							

19.2	150 mm ahead ANC	Gauge									
		X-Level									
19.3	150 mm behind ANC	Gauge									
		X-Level									
19.4	1 m behind ANC	Gauge									
		X-Level									
20	Condition of check rail and its fittings		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2		
20.1	Raised Check Rail										
20.2	Other bearing, plates, keys, blocks, bolts and elastic fastening										
21	Check Rail Clearance		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2		
			Inner	Outer	Inner	Outer	Inner	Outer	Inner	Outer	
21.1	Opposite ANC										
21.2	500 mm ahead towards toe of crossing										
20.3	500 mm behind heel of crossing										
20.4	At the flared end towards heel										
20.5	At the flared end towards toe										
22	Remarks										

DIAMOND CROSSING: WITH DOUBLE SLIP

Annexure-2/6(D) Para 237(5)



PROFORMA FOR INSPECTION OF POINTS AND CROSSINGS

Diamond Crossing: with Double Slip

Station _____							
Point No. _____							
Location _____							
Type of rail _____							
Date of laying _____							
Date of laying reconditioned crossings : _____							
Date of laying reconditioned switches : _____							
Type of sleeper/assembly _____							
Angle of crossing _____							
Nominal gauge of turnout _____							
1	Sleeper Details						
1.1	Condition of sleepers						
1.2	Squaring						
1.3	Spacing						
2	Ballast Details						
2.1	Condition of ballast						
2.2	Condition of drainage						
2.3	Ballast in shoulders and cribs						
2.4	Clean ballast cushion (mm)						
3	Condition of Switch Assembly	Switch 1	Switch 2	Switch 3	Switch 4		

3.1	Whether chipped or cracked over 200 mm length within 1000 mm from ATS		Inner							
			Outer							
3.2	Whether twisted or bent (causing gap of 5 mm or more at toe)		Inner							
			Outer							
3.3	Whether knife edge		Inner							
			Outer							
3.4	Seating of tongue rails on slide chairs		Inner							
			Outer							
3.5	Housing of stock and tongue rails		Inner							
			Outer							
3.6	Condition of fitting of switches									
3.7	Packing condition under switch assembly									
4	Creep at toe of switch									
5	Throw of Switch at ATS		Inner							
			Outer							
6	Divergence At Heel Block		Inner							
			Outer							
7	Straightness of Straight (Measured on 10 mt. chord)		Stock Rail							
			Tongue Rail							
8	Wear in Tongue Rail and Stock Rail		Switch 1		Switch 2		Switch 3		Switch 4	
			Inner	Outer	Inner	Outer	Inner	Outer	Inner	Outer
8.1	Tongue Rail	At point with 13 mm head width (as per Annexure 2/6/1)	Vertical							
			Lateral							
8.2	Tongue Rail	At point where tongue rail and stock rail level is same	Vertical							
			Lateral							
8.3	Stock Rail	At point where tongue rail and stock rail level is same	Vertical							
			Lateral							

9	Distance between gauge faces of stock rails at JOH		Switch 1		Switch 2		Switch 3		Switch 4	
10	Distance between web to web of Tongue Rails									
10.1	Leading stretcher bar									
10.2	Ist following stretcher bar									
10.3	IInd following stretcher bar									
11	Gap between top edge of stretcher bar and bottom of rail foot									
11.1	Leading stretcher bar		Inner							
			Outer							
11.2	Ist following stretcher bar		Inner							
			Outer							
11.3	IInd following stretcher bar		Inner							
			Outer							
				-2						
12	Clearance at JOH									
12.1	On Open tongue rail side		Straight							
			Turnout							
12.2	On Closed tongue rail side		Straight							
			Turnout							
13	Gauge and X-Level in Switch and Lead Portion		Straight Side				Turnout Side			
			Switch 1 and Switch 2		Switch 3 and Switch 4		Switch 1 and Switch 3		Switch 2 and Switch 4	
			Gauge	X-Level	Gauge	X-Level	Gauge	X-Level	Gauge	X-Level
13.1	At 450 mm ahead of toe of switch									
13.2	At ATS between the two stock rails									
13.3	At 150 mm behind toe of switch									
13.4	At heel of switch									
13.5	At 3 m interval in lead portion:		Station							
			0							

		1									
		2									
		3									
		4									
		5									
14	Versine in Switch and Lead Portion	Switch 1 and Switch 3				Switch 2 and Switch 4					
		Inner		Outer		Inner		Outer			
		(Heel/ATS) 0									
		1									
		2									
		3									
		4									
		5									
15	Condition of Crossing		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2		
15.1	Sign of Propogation of crack (if any)										
15.2	Burring on top surface at nose										
16	Type of Crossing										
17	Wear of Crossing		Acute Xing 1			Acute Xing 2					
			Left Wing Rail	On Nose	Right Wing Rail	Left Wing Rail	On Nose	Right Wing Rail			
				Obtuse Xing 1			Obtuse Xing 2				
				Nose 1		Nose 2		Nose 1		Nose 2	
				On Nose	Wing Rail	On Nose	Wing Rail	On Nose	Wing Rail	On Nose	Wing Rail
18	Clearance of wing rail opposite Nose of crossing and		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2		

		upto 450 mm towards heel end		Inner	Outer	Inner	Outer	Inner	Outer	Inner	Outer
19	Gauge and Cross Level			Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2	
				Straight	Turnout	Straight	Turnout	Straight	Turnout	Straight	Turnout
19.1	1 m ahead of ANC	Gauge									
		X-Level									
19.2	150 mm ahead ANC	Gauge									
		X-Level									
19.3	150 mm behind ANC	Gauge									
		X-Level									
19.4	1 m behind ANC	Gauge									
		X-Level									
20	Condition of check rail and its fittings		Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2		
20.1	Raised Check Rail										
20.2	Other bearing, plates, keys, blocks, bolts and elastic fastening										
21	Check Rail Clearance			Acute Xing 1		Acute Xing 2		Obtuse Xing 1		Obtuse Xing 2	
				Inner	Outer	Inner	Outer	Inner	Outer	Inner	Outer
21.1	Opposite ANC										
21.2	500 mm ahead towards toe of crossing										
20.3	500 mm behind heel of crossing										
20.4	At the flared end towards heel										
20.5	At the flared end towards toe										
22	Remarks										

