GOVERNMENT OF INDIA
(MINISTRY OF RAILWAYS)
(RAILWAY BOARD)

No. 2000/Elect(G)/161/1 Pt. III

New Delhi, Dt. 19.01.09

The General Manager (Elec.)
All Indian Railways including
Metro Railway/Kolkatta. CORE/Allahabad, ICF/Chennai,
CLW/Chittaranjan, RCF/Kapurthala,
The chief Administrative Officer,
Metro Railway at Delhi, Mumbai and Chennai,
Director, IRIEEN, Nasik,
Director, Indian Railway Centre for Advance Maintenance Technology, Gwalior.
Principal, Railway Staff College, Vadodara
The Director General, (TI/Electrical Standards/PS & EMU), RDSO/ Lacknow
Chief Commissioner of Railway Safety, Lacknow,
CRS/Northern Circle/Central Circle/ Eastern Circle/ Southern Circle/
South Central Circle/ South Eastern Circle/Western Circle.
MD, RVNL, August Kranti Bhawan, Bhikaji Cama Place, New Delhi,
MD/DFCCIL, 5th Floor, Pragati Maidan, Metro Station Building Complex, New Delhi,
MD/MRVC, 2nd Floor, Charchgate Station Bldg., Mumbai.

Sub: Advance Correction Slip No. 18 to Railways Manual of AC Traction (ACTM) Vol. II Pt. II, Appendix IV, 1994 (Regulation for Power Line Crossings of Railway Tracks).

Enclosed please find herewith the Advance Correction Slip No. 18, Addendum/corrigendum to Clause 17.3 & Clause 21.0 of Railways Manual of AC Traction (ACTM) Vol. II Pt. II, Appendix IV, 1994 (Regulation for Power Line Crossings of Railway Tracks,) for your information and necessary action.

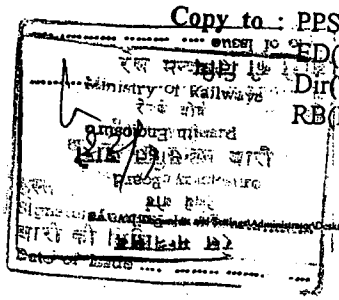
The receipt of this letter may please be acknowledged.

21/1/09

DA: 2 sheets

(Mrs. Manju Gupta)
Executive Director/Electrical Energy Management
Railway Board.

Copy to : PPS to ML, AM(Signal), AM(V), Adv./L(G), Adv./L(RS), EDRE, EDCE(G), ED(Dev.), EDRE(S&T), ED(Safety), DEE(G), DRE, JDEE(RS), DP(Spl.), Dir(Trg.), DD(Dev.) JD(MTP), JD(Safety-II), SO/RE, SO(Elec.TRS), RB(Library).



Indian Railways Manual of AC Traction Volume II Pt. II
1994 Edition, Appendix-IV
Advance Correction Slip No. 18, dated January, 2009

1. Clause 17.3 (ACTM Vol.II, Pt.II), Appendix-IV (Regulations for Power Line Crossings of Railway Tracks 1987) to be replaced as under:

17.3 (a) Vertical Clearance for new crossings/or alteration to existing crossing: The minimum height above rail level of the lowest portion of any conductor of crossing, including guard wire, under conditions of maximum sag shall be as follows:

S.N.	Over head crossing Voltage	Min. Clearance from buildings/ structures (as per I.E. Rule, 1956, Cl. -80)	Clearance required for 25 kV AC traction				
			Min. clearance between highest traction conductor & lowest crossing conductor (as per I.E. Rule 1956, Cl. 87)	Minimum clearances required from rail level (Clearance as per I.E. Rule, 1956)		Clearance for double stack container (Stock height 7100 mm) routes.	
				Clearance at OHE structures (Cl. 80)	Clearance at mid OHE span (Cl.87)	Clearance at OHE structures (Cl.80)	Clearance at mid OHE span (Cl.87)
1	2	3	4	5	6	7	8
1	Up to 11 kV	By cable					
2	Above 11 & upto 33 kV	3700	2440	14660	12384	16360	14084
3	Above 33 & upto 66 kV	4000	2440	14960	12384	16660	14084
4	Above 66 & upto 132 kV	4600	3050	15560	12994	17260	14694
5	Above 132 & upto 220 kV	5500	4580	16460	14524	18160	16224
6	Above 220 & upto 400 kV	7300	5490	18260	15434	19960	17134
7	Above 400 & upto 500 kV	8200	7940	19160	17884	20860	19584
8	Above 500 & upto 800 kV	10900	7940	21860	17884	23560	19584

17.3 (b) Vertical Clearance for existing crossings:

S.N.	Over head crossing Voltage	Min. clearance on existing non-electrified routes from rail level (as per I.E. Rule 1956, Cl. 80)	Min. clearance on existing electrified routes from rail level (as per I.E. Rule 1956, Cl. 80)
1	2	3	4
1	Up to 11 kV	By cable	
2	Above 11 & upto 33 kV	10860	14100
3	Above 33 & upto 66 kV	11160	14100
4	Above 66 & upto 132 kV	11760	14600
5	Above 132 & upto 220 kV	12660	15400
6	Above 220 & upto 400 kV	14460	17900
7	Above 400 & upto 500 kV	15360	19300
8	Above 500 & upto 800 kV	18060	23400

Note:-

(i) While calculating the above clearance, Railways high tension lines running over the 1500 V DC traction structure in some sections have not been taken into consideration. Where such high tension lines exist, the height above the rail level of the highest high tension line shall be taken into account for calculating the clearances.

(ii) The working of a Railway crane under an overhead line crossing shall normally be avoided. If it becomes absolutely essential for a crane to work under such a crossing, the minimum clearance required to be maintained between the highest working point of the jib and the lower crossing conductor shall be as under:

S.N.	Nominal System Voltage kV	Min. Safe clearance mm
1	33	1500
2	66	2000
3	110	2250
4	132	2500
5	220	3500
6	400	6000
7	500	7250
8	800	11500

(iii) All heights/clearances are in mm and under maximum sag conditions.

(iv) For non-electrified, lines where new power line crossing is to be provided/existing crossing to be altered, column 5 & 7 of the table in para 17.3 (a) shall be applicable.

(v) For electrified lines, where new power line crossing is to be provided/existing crossing to be altered, clearances in para 17.3 (a) shall be applicable.

(vi) Clearance given in column 6 & 8 of table 17.3 (a) can be adopted if the OHE structure/fixed structure is beyond 6000 mm of nearest conductor of overhead crossing.

(vii) If the crossing is provided with a guarding, a minimum clearance of 2000 mm shall be maintained between the bottom of the guard wire and highest traction conductor.

(viii) Power line crossings in yard and station areas shall be avoided.

(ix) In case of existing power line where return conductor or feeder wire is not likely to be provided, height of super mast i.e. 2250mm to be reduced from the clearances of para 17.3(a).

21.0 Relaxation for existing Power line crossings

Clause 21.1, 21.2, 21.3 & 21.4 will be replaced as below:

Clause 21.1 It is desirable to provide maximum possible clearances in the case of power line from highest traction conductor used for electric traction. Based on the clearance study, reduced clearances, with approval of EIG, and subject to observance of clearances in Column 4 of Table in Para 17.3 (a) may be adopted.

Clause 21.2 Such reduced clearances would be subject to any special safeguards that may be prescribed by EIG while granting these relaxations.

Clause 21.3 Wherever feasible, special design of traction overhead equipment, return conductor, 25 kV feeder or other power line on traction mast/structure should be developed keeping in view the need for economy and other requirements, if any.

Clause 21.4 The relaxation to adopt reduced clearances shall not be applicable for new power line crossings.

Clause 21.5 Any alteration to the existing overhead power line crossings shall be done to provide the clearances prescribed in para 17.3(a).