TRACK AND CIVIL INFRASTRUCTURE

CODE OF PRACTICE

VOLUME TWO - TRAIN SYSTEM [CP2]

INFRASTRUCTURE MANAGEMENT & PRINCIPLES

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1.0 PURPOSE AND SCOPE

1.1 PURPOSE

The purpose of this part is to set standards to ensure that TransAdelaide's track and civil infrastructure management addresses sections 1 and 3 to 8 inclusive of AS 4292.2.

1.2 SCOPE

a) The guidelines of the Code of Practice for the Defined Interstate Rail Network (CP-DIRN), Volume 4, Part 1 (Infrastructure Management) have been adopted in this Code of Practice (CP2) but where necessary adapted to TransAdelaide's specific track and civil infrastructure management requirements.

b) The principles in CP-DIRN, Volume 4, Part 2 (Infrastructure Principles) have been adhered to throughout CP2.

c) The guidelines in CP-DIRN, Volume 4, Part 3 (Infrastructure Guidelines), have been adopted as a basis for CP-TS-954 (Operational signage) inclusive to CP-TS-966 (Fire prevention and control) but varied to allow for TransAdelaide's different gauge and traffic conditions.

d) This part (Infrastructure management & principles) specifies the general procedures for managing the track and civil infrastructure where these vary from CP-DIRN.

1.3 REFERENCES

1.3.1 Australian Standards

AS 4292.1 Railway safety management - Part 1: General and interstate requirements.

AS 4292.2 Railway safety management - Part 2: Track, civil and electrical infrastructure.

1.3.2 Industrial Codes

a) The Code of Practice for the Defined Interstate Rail Network, Volume 4, Part 1 (Infrastructure Management).

b) The Code of Practice for the Defined Interstate Rail Network, Volume 4, Part 2 (Infrastructure Principles).

c) The Code of Practice for the Defined Interstate Rail Network, Volume 4, Part 3 (Infrastructure Guidelines).

1.3.3 TransAdelaide documents

CP2

CP-TS-954 (Operational signage) to CP-TS-966 (Fire prevention and control): Parts 3 to 16

2.0 INFRASTRUCTURE MANAGEMENT

2.1 ADOPTION OF CP-DIRN

In accordance with clause 1.2(a), the parts of CP-DIRN (Volume 4, Part 1), which have been adapted to TransAdelaide's specific track and civil infrastructure requirements are shown in sub-sections 2.2 to 2.4 hereunder.

2.2 COMMISSIONING

The following variations to job titles have been made (table 2.1):

Table 2.1 Variations to job titles:

As defined in CP-DIRN	Titles adopted by TransAdelaide
Site manager	Track Superintendent
Line section manager	Track Superintendent

2.3 MONITORING AND MAINTENANCE

2.3.1 Walking inspections

a) Walking inspections shall keep a lookout for obvious unsafe conditions, changed conditions, or evidence of high rates of deterioration of the track and civil infrastructure which indicate unacceptable risk to operations (e.g. track geometry defects due to movement of under track structures). Walking inspections shall be sufficiently thorough to enable, if necessary, the need for detailed inspections to be determined.

b) At special locations, walking inspections shall look for obvious conditions, which may impair the capability of the track and civil infrastructure during a defined event (e.g. a blocked waterway that may affect infrastructure capability during a flood event).

c) Walking inspections require either:

i. a report by exception which records detected defects or defect indicators requiring further action to be taken; or

ii. a report requesting a general or detailed inspection; or

iii. no further action where no report is submitted.

2.3.2 Intervals between inspections

The maximum period between scheduled inspections for various elements of the track and civil infrastructure are defined in CP-TS-954 to CP-TS-966, inclusive. The adopted periods take into consideration the track and civil infrastructure condition, deterioration rates, age, functional capability, operating conditions and other environmental or local factors. A summary of specified intervals between inspections is shown in Appendix 1.

2.3.3 Reassessment

Where re-assessment is prescribed in CP2 for a localised condition, an assessment shall be made similar to the original assessment. However, where the original assessment was based on measurements from a broad inspection, such as a line inspection by the Track Geometry Car, it shall be acceptable if measurements made locally by hand are used, provided they are of similar or higher quality than the original measurements.

2.3.4 **Train speed restrictions**

Throughout CP2, whenever restricted speeds are referred to, the intention shall be that the speeds quoted shall refer to passenger trains only. Speeds for freight trains shall be as shown in table 2.2. Under no circumstances must the normal speed for a section of track be exceeded and where in CP2 a speed restriction is to be imposed, the normal speed for the track must not be exceeded if it is lower than the nominated speed limit. For example, if CP2 calls for a speed restriction of 40km/h through a turnout and the normal speed for the divergent track is 35km/h, then the maximum speed on the straight route will be 40 km/h and on the divergent route, 35km/h (unless a lower speed limit is imposed on the divergent route, as well, as may be the case if the timbers are in poor condition).

Table 2.2: Speeds for freight trains

Where the passenger train speed is:	90	80	70	60	50	40	30	20	10
the corresponding speed for freight trains shall be:	65	50	40	35	30	25	20	15	10

2.4 ELECTRICAL INFRASTRUCTURE

Consideration of electrical infrastructure does not form any part of CP2

A1.0 APPENDIX: SUMMARY OF MAXIMUM INTERVALS BETWEEN INSPECTIONS

Reference	Title	Walk-ing	General	Detailed	Other
CP-TS-954	Operational signage	31 days	3 years		-
	Line of sight	31 days	3 years		Train riding = 3 years
CP-TS-955	Structural clearances	31 days	1 year if infringes mntce. intervention standard; 6 years if between structure outline and mntce. intervention std.		Gauging passenger platforms = 26 weeks
CP-TS-956	Track geometry (running lines)	31 days	-	Track geometry car = 3 months	Train riding = 31days
CP-TS-957	***Structures***				
	Under & over track structures - timber components - steel components - concrete components - masonry components - underwater components - underground untreated timber - underground treated timber Other Structures	31 days 31 days	 1 year 2 years 2 years 2 years see note [1] see note [1] see note [1] see note [1]	 3 years 6 years 6 years 6 years 6 years 4 years 8 years see note [1]	Note [1]: Inspections shall be at intervals appropriate to each structure dependent on condition, age, structural capacity and other environmental factors and operating conditions.
CP-TS-958	Storm water drainage	31 days	1 year	5 years	-
CP-TS-959	Earthworks	31 days	1 year	-	-
CP-TS-960	***Track support systems***				
	Sleepers & fastenings	31 days	Timber sleepered track = 1 year Concrete/steel sleepered track: 2 years		More frequent inspections may be necessary if track stability is at risk
	Ballast	31 days	-		
CP-TS-961	Rails, welded and non-welded rail joints	31 days	-	Continuous ultrasonic rail testing = 1 year	Manual ultrasonic rail testing as required on new welds or to confirm defects found
	Rail wear	31 days	Following a walking inspection to confirm suspected rail defects or every 2 years		-
	Rail lubricators	31 days	3 months [includes servicing]	1 year	-
CP-TS-962	Guard/check rails, buffer stops and derails	31 days	-	-	-
CP-TS-963	Points and crossings	31 days	-	Not exceeding 1 year	-
CP-TS-964	Rail stress control	31 days	Prior to the high temperature risk period and at special locations during periods of excess temperature variation (hot or cold)		-
CP-TS-965	***Access control and protection***				
	Fences & gates	31 days	1 year	-	-
	Railway station environs	-	13 weeks	-	
	Pedestrian crossings	31 days	As for fences and gates; pathways, ramps, stairs and handrails (see railway station environs); and non-operational signage		-
	Level crossings	31 days	-	-	-
	Non-operational signage	-	3 years	-	
	Roadways within the right of way	-	To be inspected following a report of damage		-
CP-TS-966	Fire prevention and control	31 days	1 October annually	-	-