TRACK AND CIVIL INFRASTRUCTURE

CODE OF PRACTICE

VOLUME THREE - TRAM SYSTEM [CP3]

INFRASTRUCTURE MANAGEMENT & PRINCIPLES

TABLE OF CONTENTS

		Page No.
1.0	**PURPOSE AND SCOPE**	**3**
1.1	Purpose	3
1.2	Scope	3
1.3	References	3
2.0	**INFRASTRUCTURE MANAGEMENT**	**4**
2.1	Adoption of CP-DIRN	4
2.2	Commissioning	**4**
2.3	Monitoring and maintenance	4
2.4	Electrical infrastructure	4
A1.0	**APPENDIX 1: SUMMARY OF MAXIMUM INTERVALS BETWEEN INSPECTIONS**	**5**

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 (CP3) 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 CP3.

c) The guidelines in CP-DIRN, 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 track 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

Code of Practice for the Defined Interstate Rail Network, Volume 4:

Part 1 Infrastructure Management;

Part 2 Infrastructure Principles; and

Part 3 Infrastructure Guidelines.

1.3.3 TransAdelaide documents

CP3

CP-TS-974 (Operational signage) to CP-TS-986 (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

Variations to job titles have been made as shown in table 2.1:

Table 2.1 Variations to job titles:

As defined in CP-DIRN	Titles adopted by TransAdelaide
Site manager	Construction Supervisor
Line section manager	Construction Supervisor

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, which 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-974 (Operational signage) to CP-TS-986 (Fire prevention and control), 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 CP3 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 it shall be acceptable if measurements made locally by hand are used, provided they are of similar or higher quality than the original measurements.

2.4 ELECTRICAL INFRASTRUCTURE

Consideration of electrical infrastructure does not form any part of CP3

A1.0 APPENDIX: SUMMARY OF MAXIMUM INTERVALS BETWEEN INSPECTIONS

Reference	Title	Walk-ing	General	Detailed	Other
CP-TS-974	Operational signage	31 days	3 years		-
	Line of sight	31 days	3 years		Tram riding = 3 years
CP-TS-975	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-976	Track geometry (running lines)	31 days	-	Manual track geometry recording = 1 year	Tram riding = 31days
CP-TS-977	***Structures***				
	Under & over track structures	31 days			Note [1]: Inspections shall be at intervals appropriate to each structure dependent on condition, age, structural capacity and other environmental factors and operating conditions.
	- timber components		1 year	3 years	
	- steel components		2 years	6 years	
	- concrete components		2 years	6 years	
	- masonry components		2 years	6 years	
	- underwater components		see note [1]	6 years	
	- underground untreated timber		see note [1]	4 years	
	- underground treated timber		see note [1]	8 years	
	Other Structures	31 days	see note [1]	see note [1]	
CP-TS-978	Storm water drainage	31 days	1 year	5 years	-
CP-TS-979	Earthworks	31 days	1 year	-	-
CP-TS-980	***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-981	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-982	Guard/check rails, buffer stops and derails	31 days	-	-	-
CP-TS-983	Points and crossings	31 days	-	Not exceeding 1 year	-
CP-TS-984	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-985	***Access control and protection***				
	Fences & gates	31 days	1 year	-	-
	Tram stop environs	-	13 weeks	-	
	Pedestrian crossings	31 days	As for fences and gates; pathways, ramps, stairs and handrails (see tram stop 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-986	Fire prevention and control	31 days	1 October annually	-	-