Government of South Australia
Department for Infrastructure and Transport

Station Fencing – Train System

Engineering Standard

Rail Commissioner

AR-PW-PM-SPE-00129009 (D068)

DOCUMENT AMENDMENT RECORD

REV	CHANGE DESCRIPTION	DATE	COMMENTS
0	Initial Issue	Feb 11	
1	Changes in various sections	July 12	
2	Document number change	July 13	
3	Changes in various sections and incorporating new fencing standard	Mar 15	
4	Handrail and kerb rail colour changed	Jan 18	
5	Station standards update	May 19	
6	Scheduled update	June 2024	
Document Review Schedule:		June 2027	

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1. Introduction

The Department of Infrastructure and Transport owns the Adelaide Metropolitan Passenger Rail Network (AMPRN) currently operated and maintained under the Rail Accreditation of third party. There are approximately 89 train stations serving the AMPRN.

Fencing is provided at stations to delineate boundaries and provide functionality of security, safety and channeling.

2. Purpose

The purpose of this standard is to specify the design, construction and installation requirements for fencing at the station precinct. This standard should be read in conjunction with the remainder of the DIT Station Standards for the Train System, as listed in DIT Master Specification Part RW-STS-D1 Stations.

3. Scope

This standard applies to all fencing at stations on the APMRN.

4. Related Documents

DOCUMENT NAME	DOCUMENT NUMBER
Fencing and Gates Standard for Rail Corridors and Rail Facilities	CS1-DOC-000454 (KNet # 9266821)
Guideline for Protective Provisions for Electrical Earthing and Bonding for Adelaide Metro Electrified Rail Network	AR-EL-STD-0102 (KNet #4600850)
Station Pedestrian Access – Train System – D065	AR-PW-PM-SPE-00129006
Station – Shelters – Train System – D064	AR-PW-PM-SPE-00129005

5. References

- AS 1428 Design for Access and Mobility
- AS/NZS 1170.1 Structural design actions – Permanent, imposed and other actions

Legislative Requirements

- Disability Standards for Accessible Public Transport

6. Acronyms

ACRONYM	FULL NAME
AMPRN	Adelaide Metropolitan Passenger Rail Network
DIT	Department of Infrastructure and Transport
DSAPT	Disability Standards for Accessible Public Transport
OHCLZPZ	Over-Head Contact Line and Pantograph Zone

7. Design Requirements

Fencing in the station precinct shall comply with this standard and CS1-DOC-000454 Fencing and Gates Standard for Rail Corridors and Rail Facilities. All metallic fencing that falls in an Over-Head Contact Line and Pantograph Zone (OHCLZPZ) area must be in accordance with AR-EL-STD-0102 Guideline for Protective Provisions for Electrical Earthing and Bonding for Adelaide Metro Electrified Rail Network.

7.1. Handrails / Kerb Rails

Handrails and kerb rails shall be provided as an integral part of the fencing and shall be in accordance with Disability Standards for Accessible Public Transport (DSAPT), AS 1428 and AR-PW-PM-SPE-00129006 Pedestrian Access.

7.2. Weather Screen

Weather screens on shelters at the back of side platforms, may be provided in lieu of fencing at the shelter area (not applicable to the back of the platforms that are adjacent to ARTC tracks). Weather screens shall be designed to withstand crowd loading rating of “C5” in accordance with AS/NZS 1170.1 – Table 3.3 Minimum imposed actions for barriers.

Where fencing is placed along the back edge of the platform, the fencing shall neatly abut any shelter structure (where there is a screen placed at the back of a shelter) so that the horizontal gap between the shelter and fence is less than 100 mm.

Refer to AR-PW-PM-SPE-00129005 Shelters for details on weather screens.

7.3. Boundary Fencing

Spear fencing shall be provided for a distance of 50m beyond the extent of all stations on both sides (extent includes pedestrian crossing) to delineate the corridor boundary and inhibit trespass.

When fencing is provided along rail corridor boundary, the fence components:

1. shall not be installed outside the line of the boundary; and

2. shall be more than 3 m from the outside edge of the nearest rail to the boundary line.

7.4. Construction Tolerances

The tolerances of the alignment of fencing shall be in accordance with Table 7.4 and shall be verified in accordance with DIT Master Specification Part PC-SI1 Site Survey.

Table 7.4 Construction Tolerances

PLANE	DESCRIPTION	TOLERANCES
Vertical	Distance measured from base of post to top of rail on all sides	+0/-10 mm
Horizontal	Distance measured from vertical face of nearest part of the fence to gauge face of near side rail, where a negative value means an increase in the clearance dimension	+0/-25 mm
	Variance measured at top of post every 100 m	+0/-25 mm
	Variance measured at top of post every 5 m	+0/-10 mm

8. Fencing Types

The fencing types shall be:

1. 1200mm & 1600mm Tubular system - Refer to CS1-DOC-000454 – Fencing and Gates Standard for Rail Corridors and Rail Facilities for details.
2. 1800mm Spear fence - Refer to CS1-DOC-000454 – Fencing and Gates Standard for Rail Corridors and Rail Facilities for details.

Welding on-site is not permitted. All fencing shall be designed so that on-site welding is not required.