Government of South Australia
Department for Infrastructure and Transport

Station Pedestrian Access – Train System

Engineering Standard

Rail Commissioner

AR-PW-PM-SPE-00129006 (D065)

DOCUMENT AMENDMENT RECORD

REVISION	CHANGE DESCRIPTION	DATE	PREPARED	REVIEWED	APPROVED
0	Initial Issue	Feb 11	Josh Ward	Doug Gillott	Rob Taverner
1	Changes in various sections	July 12	Kuldeep Zala	Keith Charlton	Rob Taverner
2	Document number change	July 13	Kuldeep Zala	Keith Charlton	Rob Taverner
3	Sections 2, 4.3.3, 4.8.1, &4.10.1 updates and minor changes to various sections	January 18	Kuldeep Zala	Keith Charlton	Mark Pronk
4	Standards update	March 19	Sophie Wilkinson	Royce Mariadas	Mark Pronk
5	Scheduled update	July 24	Andrew Kalionis	Frank Melino	Naveen Sulake
Document Review Schedule:		July 2027			

TABLE OF CONTENTS

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.

2. Purpose

The purpose of this standard is to specify the requirements for pedestrian access at station precincts. 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 new or upgraded DIT station precincts.

4. Related Documents

DOCUMENT NAME	DOCUMENT NUMBER
Standard for Railway Pedestrian Crossings	CS4-DOC-000446
Standard – Fencing and Gates for Rail Corridors and Facilities	CS1-DOC-000454
Passive Pedestrian Crossing – Single or Multiple Tracks – Signage and Pavement Marking Layout	CS4-DRG-350290
Passive Pedestrian Crossing – Unidirectional Track – Signage and Pavement Marking Layout	CS4-DRG-350291
Passive Pedestrian Crossing – Adjacent Level Crossing – Signage and Pavement Marking Layout	CS4-DRG-350292
Active Control / Autogates – Signage and Pavement Marking Layout	CS4-DRG-350293
Standard Drawing Signage Schedule Drawing Register	CS1-DRG-361816
Station Precinct Concept – Maze (Passive Control) Standard Details	S7071, sheet 14
Pedestrian Crossing Arrangement Active Control Standard Details	TC1-DRG-200000
Pedestrian Crossing Arrangement Active Control Fence Layout	TC1-DRG-200001
Station Precinct Concept – Maze (Active Control) Notes & Legend	S7071, sheet 17
Standard Drawing Station Platform General Layout	CS1-DRG-361819
Standard Drawing Standard Amenity Shelter for Marginal Platform General Layout	CS1-DRG-361820
Standard Drawing Standard Amenity Shelter for Island Platform General Layout	CS1-DRG-361821
Station Precinct Concept – Platform TGSIs & Pavement Marking Layout	S7071, sheet 21
Standard Drawing Tubular System 1 200 mm High Details	CS1-DRG-350242

5. References

- AS/NZS 1170 Structural Design Actions
- AS 1428 Design for Access and Mobility
- AS 1742 Manual of Uniform Traffic Control Devices
- AS 4586 Slip Resistance Classification of New Pedestrian Surface Materials
- AS 4663 Slip Resistance measurement of Existing Pedestrian Surfaces
- AS 2700 Colour Standards for General Purposes
- HB 197 An Introductory Guide to the Slip Resistance of Pedestrian Surface Materials

Legislative Requirements

- *Disability Discrimination Act 1992 (DDA)*
- *Disability Standards for Accessible Public Transport (DSAPT)*

6. Acronyms

ACRONYM	FULL NAME
AMPRN	Adelaide Metropolitan Passenger Rail Network
DDA	Disability Discrimination Act
DIT	Department of Infrastructure and Transport
DSAPT	Disability Standards for Accessible Public Transport

7. Design Requirements for Access Areas

7.1. General

A minimum of one continuous accessible path of travel (primary access path) shall link all customer accessible areas of the station precinct including, where incorporated:

1. main public access to the station;
2. platforms;
3. overpass structure;
4. bus interchange(s);
5. kiss'n'go; and
6. accessible car parks.

The primary access path consisting of access paths, access ramps, landings, kerb ramps, pedestrian crossings, mazes, and lifts shall comply with the Disability Discrimination Act (DDA) and Disability Standards for Accessible Public Transport (DSAPT) and AS 1428 Design for Access and Mobility.

Lifts shall be provided in accordance with AR-PW-PM-SPE-00129004 Station Overpasses and CS1-DOC-002336 Lifts for Public Transport Infrastructure Engineering Specification.

7.2. Access Paths

Access paths (defined in DSAPT as a path that permits independent travel for all passengers within public transport premises, infrastructure or conveyances) shall be provided in accordance with DSAPT.

The minimum clear width for the primary access path shall be 1 800 mm. All other access paths shall comply with the dimensions specified in the DSAPT.

For new stations there shall be resting points for passengers along an access path if the walking distance between facilities or services exceeds 60 m. Resting points shall provide seating for a minimum of two people and space for one mobility aid.

At existing stations where site constraints do not allow for resting points at the required 60 m intervals, they shall be provided at a location where the infrastructure permits.

7.3. Access Ramps

7.3.1. General

Access ramps shall be provided in accordance with DSAPT and shall be no steeper than 1:14. There shall be horizontal landings minimum 1.2 m long at the top and bottom of ramps and along the ramp at intervals spaced no more than 6 m apart.

7.3.2. Width

The minimum clear width between handrails and between kerb rails for all ramps shall be 1 800 mm.

7.3.3. Handrails and Kerb Rails

Handrails and kerb rails shall be provided in accordance with DSAPT and AS 1428 and shall be installed on both sides of access ramps. The handrails shall extend 300 mm past the top and bottom of access ramps but shall not extend into a circulation space. The ends of handrails shall be turned down at 90 degrees and constructed in accordance with AS 1428.1, Figure 15(A) Ramp Handrails – Examples of Handrail Terminations.

Where there is a background wall or fence, handrails and kerb rails shall have a minimum luminance contrast of 30%.

The base of the kerb rail shall be at 65 mm above the ramp or landing surface, with the top at 165 mm above the finished floor surface. The kerb rail shall be made of 100 mm x 50 mm RHS (rectangular hollow section) and will be vertically aligned to the edge of the handrail in accordance with CS1-DRG-350242 Standard Drawing for Tubular System 1 200 mm High Details and will connect to the handrail via the 90 degree turn down to the ground.

Handrail and kerb rails shall be coloured in accordance with AS 2700 – Y14 “Golden Yellow“, matt finish.

7.4. Kerb Ramps

Kerb ramps shall be provided in accordance with AS/NZS 1428.4.1.

7.5. Pedestrian Crossings

7.5.1. General

All new and upgraded pedestrian crossings at railway stations shall be designed and constructed in accordance with CS4-DOC-000446 Standard for Railway Pedestrian Crossings.

7.5.2. Flangeways

Flangeways shall be installed on pedestrian crossings in accordance with CS4-DOC-000446 Standard for Railway Pedestrian Crossings.

7.6. Mazes

Both passive control mazes and active control mazes shall comply with CS4-DOC-000446 Standard for Railway Pedestrian Crossings.

7.6.1. Active Control Mazes

In the event of power and/or mechanical failure that affects the operations of the gate, the automatic gate shall be locked in the closed position, with the emergency gate locked in the open position allowing the crossing to operate as a standard passive control maze.

Refer to Drawings No. TC1-DRG-200000 Pedestrian Crossing Arrangement Active Control Standard Details and TC1-DRG-200001 Pedestrian Crossing Arrangement Active Control Fence Layout.

7.6.2. Signalling Design for Active Control Mazes

A DIT approved signalling design engineer shall provide detailed signaling design and drawings associated with the Active Control Mazes.

Where ARTC trains operate adjacent to an Active Control Maze there shall be a liaison with ARTC in conjunction with DIT to establish specific signaling design requirements. ARTC operating speeds can be up to 120 km/h and therefore require a different level of signaling design to that of AMPRN.

7.6.3. Orientation

For uni-directional tracks, mazes shall be oriented towards oncoming trains.

For bi-directional tracks, the mazes shall be oriented towards:

1. the direction in which the oncoming trains have minimum or less sight distance (refer Clause 7.6.5 Sight Lines and Signal Sighting); or
2. the direction in which the oncoming trains predominantly travel.

7.6.4. Sight Lines and Signal Sighting

Where obstructions cannot be removed to achieve the required sight distance, active controls may be required. Refer to CS4-DOC-000446 Standard for Railway Pedestrian Crossings.

7.6.5. Clearances

Clearance to the nearest obstruction (i.e. closest edge of fence to the outside edge of rail) shall be in accordance with CS4-DOC-000446 Standard for Railway Crossings and as detailed in drawing numbers TC1-DRG-200000 Pedestrian Crossing Arrangement Active Control Standard and S7071 sheet 14 Pedestrian Maze Arrangement (Passive Control) Standard Details.

7.6.6. Drainage

Mazes shall not impede the track drainage.

Drainage shall be provided at rail formation level adjacent to the pedestrian crossing to allow for continuous track drainage. Refer to CS1-DOC-001218 Track and Civil Infrastructure – Drainage – Train System Engineering Standard.

7.6.7. Conduits

For Active Control Mazes, new conduits shall be installed to service the power, lighting and signalling requirements in accordance with the signalling design.

Two spare 100 mm diameter conduits shall be installed under the maze for future use.

7.6.8. Fencing and Gates

Refer to CS1-DOC-000454 Fencing and Gates for Rail Corridors and Facilities.

7.7. Path Widths

The minimum clear width (excluding TGSIs) of access paths and other paths (i.e. those not on the primary access path) shall be:

1. 2 000 mm – for those surrounding a car park; and
2. 1 800 mm – for all other situations.

7.8. Surfaces

The surface of public access areas shall be as specified in Table 7.8.

Table 7.8 Surface Types

AREA	SURFACE
Platforms	Concrete
Primary access path	Concrete
Access ramps	Concrete (preferred) or Asphalt
Landings	Concrete (preferred) or Asphalt
Kerb ramps	Concrete
Pedestrian crossings	Asphalt
Mazes	Concrete
Other paths	Concrete or Asphalt

7.8.1. Access Paths

Surfaces of access paths shall be free of irregularities that could restrict wheel chair movement or confuse persons using a cane.

Surfaces of the primary access paths shall be slip resistant in all weather conditions to meet AS 4586, AS 4663 and HB 197. All surface materials shall be classified as “R10” or “R11” resistant, as defined in Table 5 of AS 4586. This shall be read in conjunction with HB 197.

Vertical differences in level between abutting surfaces in access paths shall not exceed 3 mm in accordance with AS 1428.1 Clause 7 Floor or Ground Surfaces on Continuous Accessible Paths of Travel and Circulation Spaces.

7.8.2. Accessible Public Areas

Surfaces that are accessible to the public including but not limited to primary access paths and other paths shall:

1. be even and shall not have any trip hazards;
2. be free of irregularities that could trap heels;
3. be safe for all users in all weather conditions and under all light conditions;
4. be slip resistant in all weather conditions to meet AS 4586, AS 4663 and HB 197;
5. be free draining, i.e. no ponding of water;
6. have a minimum grade of 1:100;
7. not exhibit sudden changes of level;
8. avoid unnecessary sharp transitions in gradient, texture or colour; and
9. have a smooth transition between any existing or new surface.

7.8.3. Concrete

All concrete surfaces shall have a textured broom finish.

The broom finish shall run in the same direction as the cross fall to ensure surface run off and avoid ponding of water. Consequently the broom finish for:

1. platforms – shall run perpendicular to the tracks; and
2. primary access and other paths – shall typically run perpendicular to path of travel in order to minimise sheeting of water.

The concrete for platform surfaces and concrete footings / plinths for furniture shall be coloured in accordance with AR-PW-PM-SPE-00129003 Platforms and AR-PW-PM-SPE-00129007 Furniture respectively.

All other concrete surfaces shall be natural grey concrete.

7.9. Pavement Design

Access paths and other paths shall be constructed in accordance with DIT Master Specification Part R84 Secondary Paving.

7.10. Tactile Ground Surface Indicators

7.10.1. General

Tactile Ground Surface Indicators (TGSIs) shall be provided in accordance with AS/NZS 1428.4.1.

TGSIs shall be installed along the full width of an accessible path of travel. Concrete TGSIs shall be used and shall be embedded using a low shrink, high strength grout ensuring the joint is flush with the surrounding surface levels.

The infill between blocks shall be grouted with no–shrink cement material and colour matched. The methodology shall be approved by Unit Manager Track & Civil Engineering prior to installation.

7.10.2. Warning Indicators

Warning Indicators shall be installed at locations in accordance with AS/NZS 1428.4.1, CS1-DRG-361819, CS1-DRG-361820, CS1-DRG-361821 and Drawing No. S7071 sheet 21 including, but not limited to:

1. top and bottom of access ramps;
2. kerb ramps;
3. sides of pedestrian crossings;
4. mazes;
5. along the full length of the platform;
6. at stairs; and
7. bus stops.

7.10.3. Directional Indicators

No directional TGSIs shall be used within the station precinct, except where specified in AR-PW-PM-SPE-00129011 Station Bus Interchanges.

If there is deemed a need for directional indicators in other areas of the station precinct, they shall be approved by Unit Manager Track & Civil Engineering and shall be installed in accordance with AS/NZS 1428.4.1.

7.10.4. Construction Tolerances

The tolerances of the alignment of TGSIs shall be in accordance with Table 7.10.4 and shall be verified in accordance with Part PC-SI1 Site Survey.

Table 7.10.4 Construction Tolerances

PLANE	DESCRIPTION	TOLERANCES
Vertical	Permissible irregularities under a 3 m straight edge	+0/-2 mm
Horizontal	Permissible irregularities under a 3 m straight edge	+0/-2 mm

7.11. Signage and Pavement Marking

Signage and pavement marking shall be provided in accordance with AR-PW-PM-SPE-00129010 Station Signage and Pavement Marking.

7.12. Lighting

Lighting in areas accessible to the public shall be provided in accordance with CS5-DOC-003511 - Public Transport Standard: Electrical Infrastructure Engineering – Design.).

7.13. CCTV

CCTV in areas accessible to the public shall be provided in accordance with PI5-DOC-003517 – Public Transport Infrastructure Security Systems – Engineering Specification.