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1993 ed.

Australian Standard®
1428.1—1988

DESIGN FOR ACCESS AND MOBILITY
PART 1—GENERAL REQUIREMENTS FOR ACCESS—BUILDINGS

STANDARDS AUSTRALIA
Incorporated by Royal Charter

AMENDMENT No 1
to
AS 1428.1—1988
DESIGN FOR ACCESS AND MOBILITY
PART 1—GENERAL REQUIREMENTS FOR ACCESS—BUILDINGS

CORRECTION

The 1988 edition of AS 1428.1 is amended as follows; the amendment(s) should be inserted in the appropriate place.

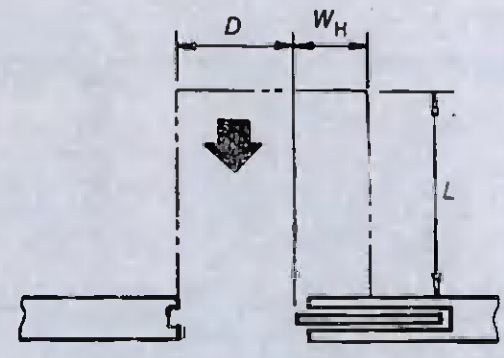
SUMMARY: This Amendment applies to Figure 15.

Published on 16 January 1989.

AMDT No 1 JAN. 1989

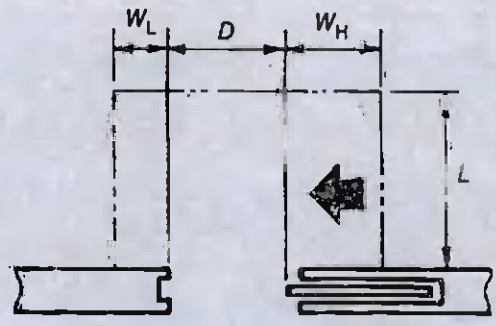
Page 19. Figure 15.

Delete existing (a) and (c) and *substitute*:



D	L	W_L	W_H
760	1 350	0	480
800	1 350	0	470
850	1 350	0	460
900	1 350	0	445
950	1 350	0	435
1 000	1 350	0	415

(a) Front approach



D	L	W_L	W_H
760	1 180	345	610
800	1 180	305	610
850	1 180	255	610
900	1 180	205	610
950	1 180	160	610
1 000	1 180	105	610

(c) Slide-side approach

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STANDARDS AUSTRALIA

Amendment No 2
to
AS 1428.1—1988
Design for access and mobility
Part 1: General requirements for access—Buildings

REVISED TEXT

The 1988 edition of AS 1428.1 is amended as follows; the amendment(s) should be inserted in the appropriate place.

SUMMARY: This Amendment applies to Clauses 5.10, 5.13, 6.3(a), 6.8, 6.9(b), 8.1(d), 8.2, 11.2.3, 11.2.8 and Figures 4, 8, 11, 19 and 27.

Published on 13 October 1989.

AMDT No 2 OCT. 1989

Page 5. Clause 5.10.

Delete existing definition and *substitute*:

5.10 Kerb ramp—an inclined accessway with a length not greater than 1520 mm and a gradient not steeper than 1 in 8, located within a kerb.

AMDT No 2 OCT. 1989

Page 5. Clause 5.13.

Delete existing definition and *substitute*:

5.13 Step ramp—an inclined accessway with a length not greater than 1520 mm and a gradient not steeper than 1 in 8, located in, or instead of, a step other than a kerb.

AMDT No 2 OCT. 1989

Page 6. Clause 6.3(a).

Delete existing Clause and *substitute*:

(a) The maximum gradient of a ramp exceeding 1520 mm in length shall be 1 in 14.

AMDT No 2 OCT. 1989

Page 9. Figure 4.

Delete existing Legend and *substitute*:

LEGEND:

G = difference in gradient between Surfaces A and B
e.g. Surface A = 1:8
Surface B = 1:22
G = 1:12.56

θ = acceptable angle of approach for a maximum of 8 mm deflection of one wheel of a wheelchair.

NOTE: For intermediate values of *G*, take to nearest higher value in the table, e.g. 1:12.56 take to 1:14.

AMDT No 2 OCT. 1989

Page 11. Clause 6.8.

Delete existing Clause and *substitute*:

6.8 Kerb ramps and step ramps.

6.8.1 *Profile.*

(a) The design and construction of kerb ramps and step ramps shall be as shown in Figure 8.

(b) The abutment of surfaces at the top and bottom of kerb ramps and step ramps shall be in accordance with Clause 6.7.

(c) The sides of kerb ramps and step ramps shall be graded plane surfaces.

6.8.2 *Location.* Kerb ramps and step ramps shall be graded in the direction of travel as shown in Figure 7. Where an intersection allows pedestrian traffic to cross at any angle the kerb ramp shall be graded and carried around the quadrant as shown in Figure 7.

AMDT No 2 OCT. 1989

Page 11. Clause 6.9(b).

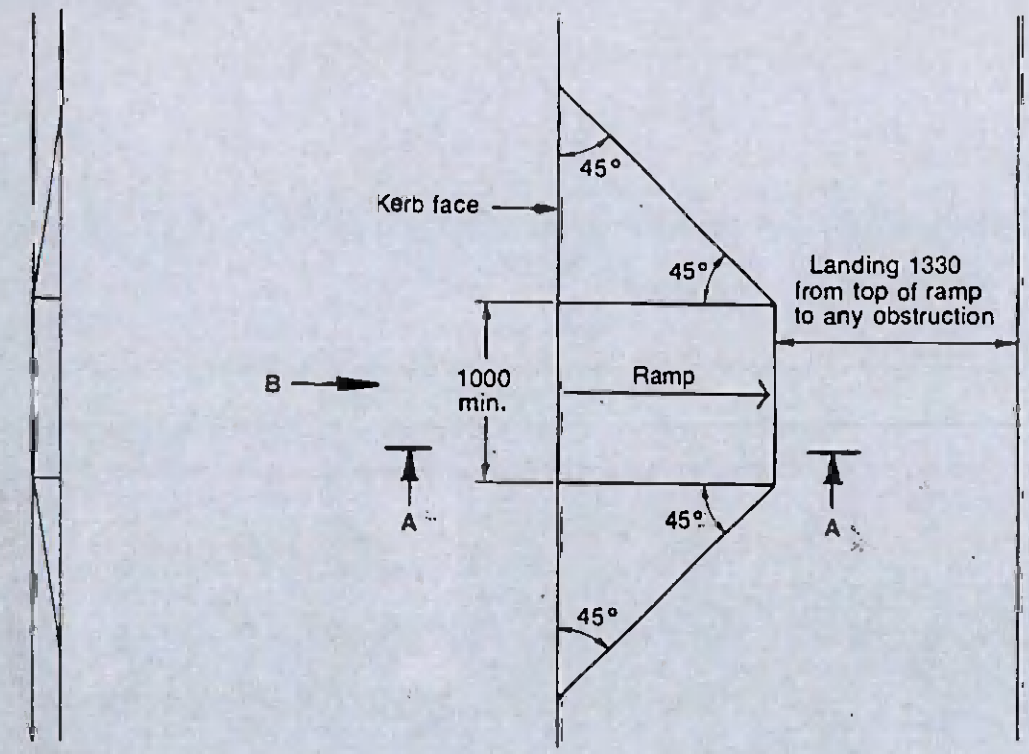
Delete existing Clause and *substitute*:

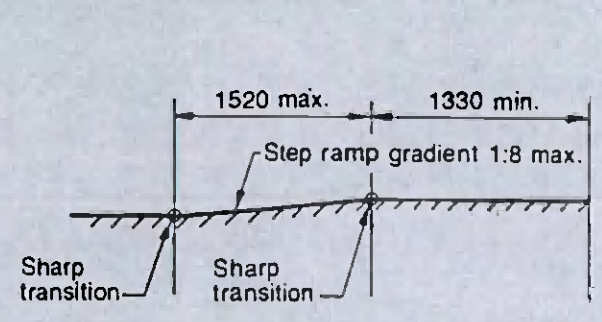
(b) Where doorways are at landings (see examples in Figure 9), the dimensions of the landings shall be in accordance with the requirements for circulation spaces at doorways in Clause 8.3.

AMDT No 2 OCT. 1989

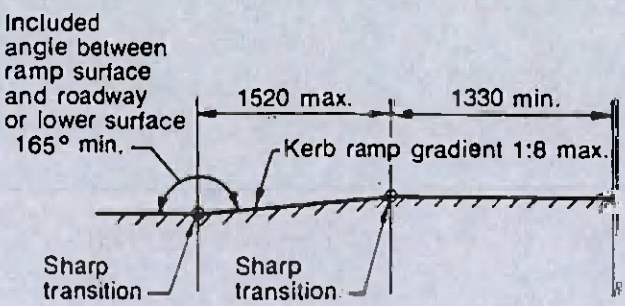
Page 12. Figure 8.

Delete existing Figure and *substitute*:





Step ramp
SECTION A-A



Kerb ramp
SECTION A-A

NOTES:
1. The ramp and sloping sides should be slip resistant and of a colour that contrasts with the adjoining surfaces.
2. A tactile indicator should be integrated and extended for 200 mm away from the ramp at the sharp transition at the top and bottom of the ramp. This could take the form of rough brooming or similar texture which will aid orientation for people with a visual impairment.

DIMENSIONS IN MILLIMETRES

FIGURE 8. KERB RAMPS AND STEP RAMPS

AMDT No 2 OCT. 1989

Page 15. Clause 8.1(d).

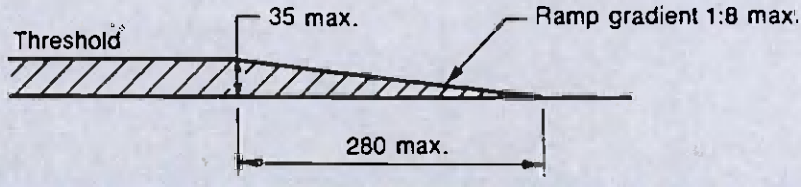
Delete existing Clause and *substitute*:

(d) If a threshold is required, the height shall be not more than 35 mm and a ramp with a length of not more than 280 mm shall be provided (see Figure 11).

AMDT No 2 OCT. 1989

Page 15. Figure 11.

Delete existing Figure and *substitute*:



DIMENSIONS IN MILLIMETRES

FIGURE 11. RAMPED THRESHOLD

AMDT No 2 OCT. 1989

Page 15. Clause 8.2.

Insert new Note as follows:

NOTE: A wider doorway choice is desirable.

AMDT No 2 OCT. 1989

Page 22. Clause 11.2.3.

Delete existing Clause and *substitute*:

11.2.3 Cistern. The cistern may be either recessed or surface mounted. Surface mounted cisterns shall comply with Clause 11.2.8.

AMDT No 2 OCT. 1989

Page 22. Clause 11.2.8.

Delete existing Clause and *substitute*:

11.2.8 Circulation space in water closets. For each water closet the unobstructed circulation space from the finished floor to a height of not less than 900 mm shall be as shown in Figure 23. The toilet paper dispenser (see Clause 11.2.6), grabrails (see Clause 11.2.7) and the toilet pan are permitted in this space. A surface mounted cistern is also permitted in this space provided that the installation is within the dimensional requirements of Figures 19 and 20.

STANDARDS AUSTRALIA

Amendment No 3
to
AS 1428.1—1988
Design for access and mobility
Part 1: General requirements for access—Buildings

REVISED TEXT

The 1988 edition of AS 1428.1 is amended as follows; the amendment(s) should be inserted in the appropriate place.

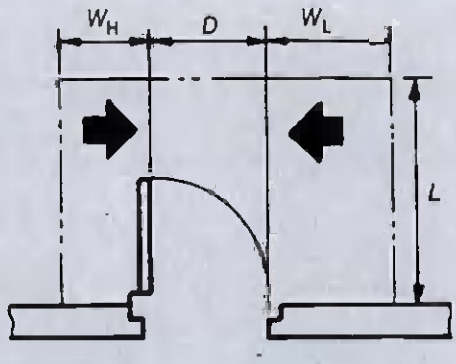
SUMMARY: This Amendment applies to Figure 13.

Published on 7 May 1990.

AMDT No 3 MAY 1990

Page 16. Figure 13.

Delete existing (d) and *substitute:*



D	L	W_H	W_L
760	1 485	610	850
800	1 510	610	840
850	1 570	610	810
900	1 665	610	780
950	1 725	610	725
1 000	1 815	610	625

(d) Either approach,
door opens towards a user

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AUSTRALIAN STANDARD

DESIGN FOR ACCESS AND MOBILITY
Part 1
GENERAL REQUIREMENTS FOR ACCESS—BUILDINGS

AS 1428.1—1988

First published as AS CA52.1—1968.
Revised and redesignated AS 1428—1977.
Revised in part and redesignated AS 1428.1—1988.

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
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ISBN 0 7262 5213 1

PREFACE

This Standard was prepared by the Association's Committee on Access for People with Disabilities to supersede (in part) AS 1428—1977, *Code of practice for design rules for access by the disabled.*

The revision of AS 1428—1977 was requested by the Australian Uniform Building Regulations Co-ordinating Council (AUBRCC) so that a Standard for access for people with disabilities into and within buildings would include only those items which could be covered by building regulations to be applied through the proposed Building Code of Australia. In consequence of this revision, the committee decided that initially AS 1428 should be divided into two parts, this Standard (Part 1) consisting of only those requirements for access which are to be regulated under the Building Code and Part 2, which will include other requirements for access which may or may not be regulated by other Authorities, and special requirements for purpose-built buildings. Part 2 is in course of preparation and is expected to be published within two years. Ultimately it is intended that Part 1 be used in conjunction with Part 2.

As a project for the 1981 International Year of Disabled Persons, a study was commissioned by AUBRCC to test those provisions of AS 1428—1977 that could be regulated. As a starting point for the study it was decided that convenient access for 80 percent of known adult wheelchair types (and hence wheelchair users) was an acceptable target. The concept of the 'A80' (adults/80 percent) wheelchair was then developed. The 'A80' test wheelchair is an adult size wheelchair which is representative of at least 80 percent of the manual and electric wheelchairs currently used in Australia, and its dimensions have been applied in determining minimum space requirements in this Standard.

The 'A80' test wheelchair dimensions are adopted as the minimum requirement for physical access as most other forms of mobility impairment can be accommodated within these dimensional parameters.

Because of the many different situations which may need to be addressed when designing buildings and facilities, it was seen as necessary for the Standard to provide a range of data so that the requirements for access can be met while allowing flexibility in design and when limitations are posed by other building conditions. The endeavour was to make the Standard a practical reference document for designers, particularly with regard to problem areas such as doorways and sanitary facilities. To assist in the designing of combined sanitary facilities, a set of transparent overlays for each sanitary facility, i.e. WC, washbasin, two-walled shower recess and three-walled shower recess, together with its required circulation space, has been provided with the Standard.

Because this Standard contains only those items which are able to be regulated by the proposed Building Code of Australia, some items such as lighting, shelving and wall units, signals and warnings and work surfaces which were included in AS 1428—1977 are not included in this Standard but will be specified in Part 2. Also because this Standard claims to meet only basic needs for minimum access, items such as water closets and shower recesses are included, while urinals and baths which are additional to what are considered to be minimum requirements, will be included in Part 2. Requirements for car parking and lifts are the subjects of separate Standards which are referred to in this Standard.

CONTENTS

FOREWORD

Criteria for building and design Standards have been based on the assumption that the average person is middle-aged, healthy and ambulant. Only minimal provision, if any, has been made for people with disabilities.

In 1981 the Australian Bureau of Statistics published the result of a survey, 'Handicapped Persons in Australia—1981'. This survey found that 13.2 percent of the population had a disability and that approximately 8 percent of the population experienced mobility limitations.

These percentages are not necessarily constant owing to the continuously changing nature of our society. This is exemplified by the accelerating pace of our mechanized society, which results in increasing accident rates, and by decreasing birth rates and advances in medical science which are bringing about a greater proportion of older people in the community.

People with limited mobility face additional physical barriers to access to buildings and facilities.

The research study (see Preface) on which this Standard is based concentrated primarily on the needs of disabled people in the physical environment. In so doing it illustrated how provisions of access and facilities for disabled people could be integrated, in almost all cases, with those for the able bodied, thus minimizing feelings of segregation that may be experienced by disabled people.

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
DESIGN FOR ACCESS AND MOBILITY

PART 1: GENERAL REQUIREMENTS FOR ACCESS—BUILDINGS

1 SCOPE. This Standard specifies minimum design requirements for elements of buildings and related facilities; in particular, access pathways, circulation spaces, and fitments, to permit access by people with disabilities.

NOTE: This Standard does not include all requirements for access for people with particular disabilities, or all requirements for buildings which are purpose-built for people with disabilities.

2 PURPOSE. The requirements established in this Standard are intended to permit general use of buildings and facilities by people with disabilities acting independently, or in the company of an assistant where a person's usual method of operation is with an assistant.

3 APPLICATION. This Standard is to be applied to the design of buildings and related facilities as required by the responsible Local, State or Federal regulatory body, other Standards, contract documents, and the like.

4 REFERENCED DOCUMENTS. The documents below are referred to in this Standard.

AS
1172 Vitreous china water closet pans
1735 SAA Lift Code
Part 12: Facilities for persons with disabilities (AS 1735.12)
2208 Safety glazing materials for use in buildings (human impact considerations)
2700 Colour standards for general purposes
2890 Off-street parking
Part 1: Car parking facilities (AS 2890.1)
2899 Public information symbol signs
Part 1: General information signs (AS 2899.1)

5 DEFINITIONS. For the purpose of this Standard, the definitions below apply.

5.1 Shall—indicates that a requirement is mandatory.

5.2 Should—indicates a recommendation.

5.3 May—indicates that a requirement is optional.

5.4 Angle of approach—the angle between the centre line of one path of travel and the centre line of an adjoining path of travel.

5.5 Circulation space—contains the net, unobstructed area for a minimum height of 2000 mm above the finished floor or ground surface (unless a clause in this Standard states otherwise), which is that space surrounding built elements, landscape elements, and fixtures and fittings required for movement into, and within buildings.

5.6 Continuous accessible path of travel—an uninterrupted path of travel to or within a building providing access to all required facilities. This accessible path shall not incorporate any step, stairway, turnstile, revolving door, escalator or other impediment which would prevent it being negotiated by people with disabilities.

5.7 Grabrail—a rail used to give a steadying or stabilizing assistance to a person engaged in a particular function.

5.8 Handrail—a rail used in circulation areas such as corridors, passageways, ramps and stairways to assist in continuous movement.

5.9 Kerb—a side barrier to a trafficable surface.

5.10 Kerb ramp—an inclined accessway with a length not greater than 1200 mm and a gradient not steeper than 1 in 8, located within a kerb.

5.11 Landing—a flat or crowned surface with a gradient not steeper than 1 in 40.

5.12 Ramp—an inclined accessway with a gradient steeper than 1 in 20 but not steeper than 1 in 14.

5.13 Step ramp—an inclined accessway with a length not greater than 1200 mm and a gradient not steeper than 1 in 8, located in, or instead of, a step other than a kerb.

5.14 Walkway—any accessway with a gradient not steeper than 1 in 20.

6 WALKWAYS, RAMPS AND LANDINGS.

6.1 General. Walkways and ramps and landings shall have an unobstructed width of not less than 1000 mm and an unobstructed vertical clearance of not less than 2000 mm.

6.2 Walkways. The design and construction of walkways shall comply with the following:

(a) Walkways shall be provided with landings as specified in Clause 6.9 at intervals not exceeding—
  (i) for walkway gradients of 1 in 33 . . . 25 m;
  (ii) for walkway gradients of 1 in 20 . . . 14 m; and
  (iii) for walkway gradients between 1 in 33 and 1 in 20, at intervals which shall be obtained by linear interpolation.

  NOTE: Landings are not required where walkway gradients are flatter than 1 in 33.

(b) The gradient of walkways between landings shall be constant.

(c) Where at least one side of a walkway is bounded by—
  (i) a kerb as specified in Clause 6.3(f) with a handrail as specified in Clause 6.3(e); or
  (ii) a wall with a handrail as specified in Clause 6.3(e),

  the intervals in (a) above can be increased by 30 percent.