



Parking facilities

Part 5: On-street parking



AS 2890.5:2020

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- Australian Automobile Association
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- Australian Local Government Association
- Australian Motorcycle Council
- Department of Transport and Main Roads (Qld)
- Engineers Australia
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Parking facilities

Part 5: On-street parking

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Preface

This Standard was prepared by Standards Australia Committee CE-001, Parking Facilities, to supersede AS 2890.5—1993.

The objective of this Standard is to set out minimum requirements and recommendations for the provision of on-street parking.

The major changes in this edition are as follows:

- (a) Replacement of the angle parking figures with a series of simplified tables, supported by more detailed information in [Appendix A](#).
- (b) Inclusion of references to bicycles.
- (c) Clarification and expansion of criteria relating to traffic speeds and volumes, noting in particular the introduction of the 50 km/h general urban speed limit.
- (d) Removal of the safety buffer for angle parking in low speed and low volume streets.
- (e) Recommendations against on-street parking in some higher speed and higher volume environments.
- (f) More detailed advice on parking for other user groups such as motorcycles, larger vehicles and accessible parking.
- (g) Recommendations on the quantity of accessible parking.
- (h) Updated figures to reflect these changes.

All parts in the AS(/NZS) 2890 series can be found in the Standards Australia online catalogue.

The terms “normative” and “informative” are used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

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Introduction

The provision of on-street parking is an integral part of urban transportation planning. In conjunction with off-street parking facilities, it seeks to cover all parking needs, especially in commercial and business districts. Parking authorities need to develop policies for both on-street and off-street parking. A typical policy for high activity business districts would have most of the parking demand met by providing off-street parking, ensuring adequate short-term parking is available for shoppers and visitors, minimizing long-term parking through pricing and other controls and severely restricting parking on arterial and sub-arterial roads.

Conformance with an Australian Standard does not of itself confer immunity from legal obligations.

Although it provides minimum requirements, this Standard cannot be taken as a textbook for the design of on-street parking. The services of a competent person experienced in designing parking facilities should be sought in the application of this document.

Australian Standard®

Parking facilities

Part 5: On-street parking

Section 1 Scope and general

1.1 Scope

This Standard sets out requirements for the location, arrangement and dimensions of on-street parking facilities. It includes provisions for special classes of vehicles and for people with disabilities, together with guidelines for the control of parking.

It normally applies to parking on public roads that provide for through traffic as well as traffic seeking access to immediately adjacent development. However, in large off-street car parking areas, high volume circulating roadways on which there is some parking may need to be treated in accordance with this Standard.

On-street parking for buses is excluded from the scope of this Standard.

1.2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 1428.1, *Design for access and mobility, Part 1: General requirements for access — New building work*

AS 1742.11, *Manual of uniform traffic control devices, Part 11: Parking controls*

AS 2890.1, *Parking facilities, Part 1: Off-street car parking*

AS/NZS 1158, *Lighting for roads and public spaces (series)*

AS/NZS 2890.1, *Parking facilities, Part 1: Off-street car parking*

AS/NZS 2890.6, *Parking facilities, Part 6: Off-street parking for people with disabilities*

Austrroads Guide to Traffic Management

Austrroads Guide to Road Design

1.3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

1.3.1

bus

large vehicle for the purposes of transporting people and that has seating for more than 12 persons, including the driver

1.3.2

cars and light commercial vehicles

vehicles that meet the length and width requirements of the B99 classification defined in AS/NZS 2890.1

1.3.3

competent person

person who has acquired, through education, training, qualification or experience or a combination of these, the knowledge and skill enabling that person to perform the task required

1.3.4**large vehicle**

vehicle that is longer or wider than the B99 classification defined in AS/NZS 2890.1

1.3.5**no stopping**

requirement that a vehicle may not be stopped or allowed to remain stationary

1.3.6**parking zone**

portion of a roadway available for parking, full-time or part-time, and designated by means of parking control signs

Note 1 to entry: Refer to AS 1742.11.

1.3.7**road**

entire width of a right-of-way between property boundaries, and including footpaths and bicycle paths

1.3.8**roadway**

any one part of the width of a road devoted particularly to the use of vehicles, inclusive of shoulders and auxiliary lanes

1.3.9**safety buffer**

area between the parking space and the adjacent trafficable lane or cycle lane to assist with the safe entry and exit from a parked vehicle

Note 1 to entry: The safety buffer is not intended as a designated operating space for bicycles.

1.3.10**shall**

indicates that a statement is mandatory

1.3.11**shared area**

area provided for access or egress to or from a parked vehicle and which may be shared with any other purpose provided that other purpose is not a traffic or bicycle lane and only causes transitory obstruction of the area

1.3.12**should**

indicates a recommendation

Section 2 Parking design principles

2.1 General

This Section identifies environmental factors in the arrangement of parking in consideration of safety, preservation of access and the convenience of all road users, as follows:

- (a) Parking control signs (see [Clause 2.2](#)).
- (b) Provision of adequate end clearances to intersections and driveways (see [Clause 2.3](#)).
- (c) Preservation of safe and convenient pedestrian and cyclist access (see [Clause 2.4](#)).
- (d) Identification of unsafe parking locations (see [Clause 2.5](#)).
- (e) On-street parking hazards and safety measures (see [Clause 2.6](#)).
- (f) Safety measures (see [Clause 2.6.2](#)).
- (g) Provision of street lighting (see [Clause 2.7](#)).

2.2 Parking control signs

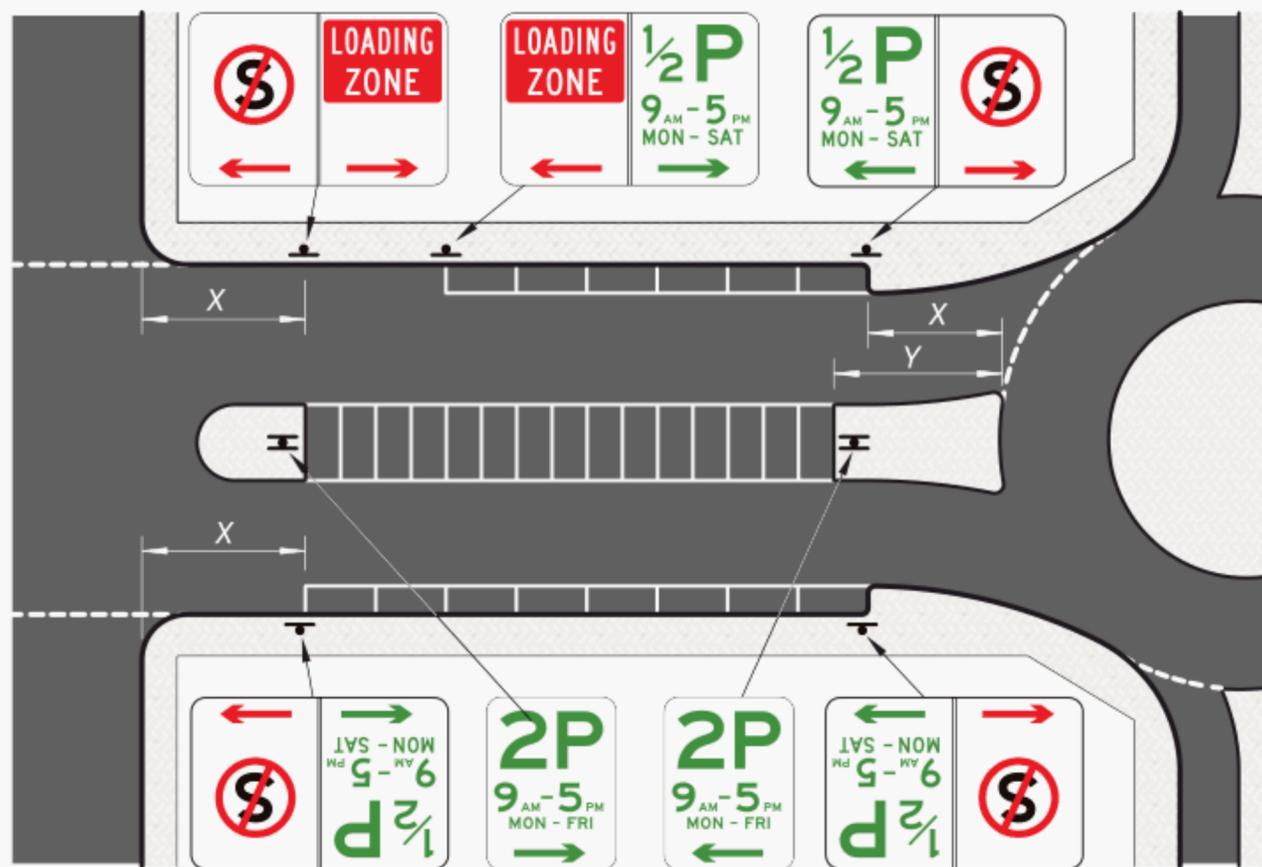
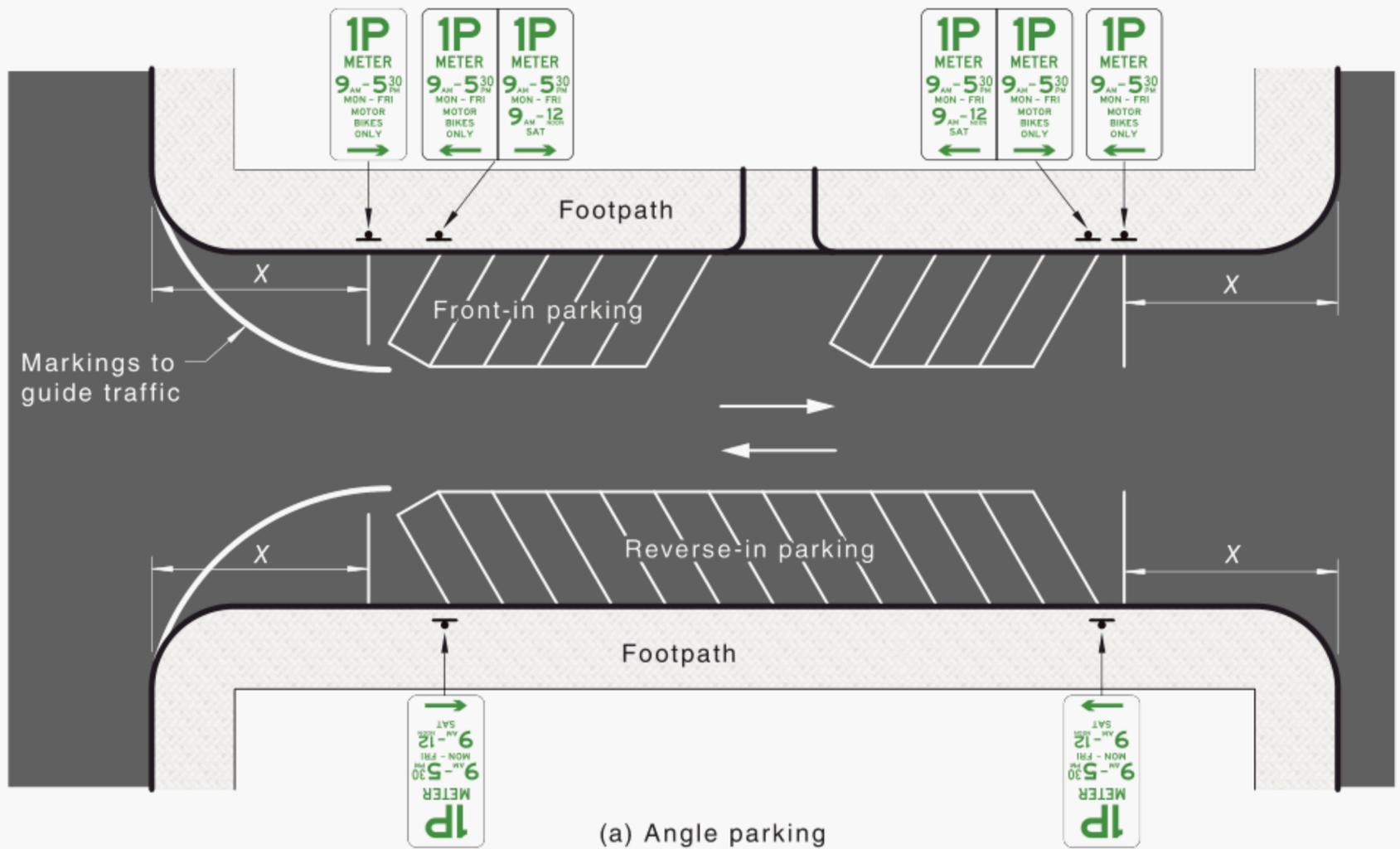
The usual method of controlling on-street parking is by means of parking control signs. Requirements for the use of these signs together with associated pavement markings to prohibit stopping or parking, to control parking durations, and to reserve space for special usages or classes of vehicle are specified in AS 1742.11.

2.3 End clearances

The required clearances between the end of a parking area and an intersection, laneway, driveway or pedestrian crossing, are to be determined by the following:

- (a) The regulatory “no-stopping” distance at an intersection, as specified in traffic regulations.
- (b) The provision of additional end clearance to preserve adequate intersection sight distance for traffic entering from side streets, laneways or driveways. Typical cases where regulatory end distances may be insufficient include —
 - (i) angle parking in the main street;
 - (ii) main street parking on a curve; and
 - (iii) end spaces sometimes occupied by large vehicles.
- (c) The prohibition of parking for additional distances on the approaches to signallized intersections to accommodate queues.
- (d) The need to provide for left turn lanes at intersections.
- (e) In addition to restrictions at intersections, the need to prohibit parking for specified distances, for example in the vicinity of —
 - (i) children’s crossings, pedestrian crossings and refuges;
 - (ii) bus/tram stops;
 - (iii) railway level crossings;
 - (iv) fire hydrants; and
 - (v) road bridges, except where parking provisions can be made.

The extent of such prohibitions is given in traffic regulations.
Provision of end clearances is illustrated in [Figure 2.1](#).



Key

X = the regulatory or approved no-stopping distance

Y = the distance required to provide adequate sight distance for entering traffic [see [Clause 2.3\(b\)](#)]

NOTE If $Y < X$, then X is used.

Figure 2.1 — Typical end clearances

2.4 Allowances for pedestrians and cyclists

On street parking should consider pedestrian and cyclist amenity and safety. Parking should minimize obstructions to pedestrians and cyclists. The following requirements shall be observed:

- (a) *Angle parking, front-in* — Provide a minimum 2.0 m of clear width for footpaths and 2.4 m for bicycle paths. Wheelstops may be required to control vehicle overhang encroachment.
- (b) *Angle parking, reverse-in* — Provide a minimum 2.4 m of clear width for footpaths and bicycle paths. Wheelstops may be required to control vehicle overhang encroachment.

NOTE 1 Clear width is clear of any sign posts, power poles, landscaping, street furniture, etc as well as any vehicular overhangs.

NOTE 2 The effects of exhaust fumes on people should be considered in the determination of whether reverse-in parking is appropriate (e.g. outdoor dining area).

NOTE 3 Front-in parking may create safety hazards when reversing out into traffic flow, including cyclists.

Where wheelstops are used they shall be 90 mm to 100 mm in height and at least 2.0 m in length. Wheelstops shall provide 30 % luminance contrast to the ground surface to facilitate visibility by people with vision impairment. The distance from wheelstop to kerb shall be 0.6 m for front-in parking and 0.9 m for reverse-in parking (see [Figure 2.2](#)). Wheelstops shall be installed at right angles to the direction of parking. The use of wheelstops in locations where they may be a hazard to pedestrians or cyclists, should be avoided wherever practicable.

NOTE 4 See AS 1428.1 for luminance contrast test methods.

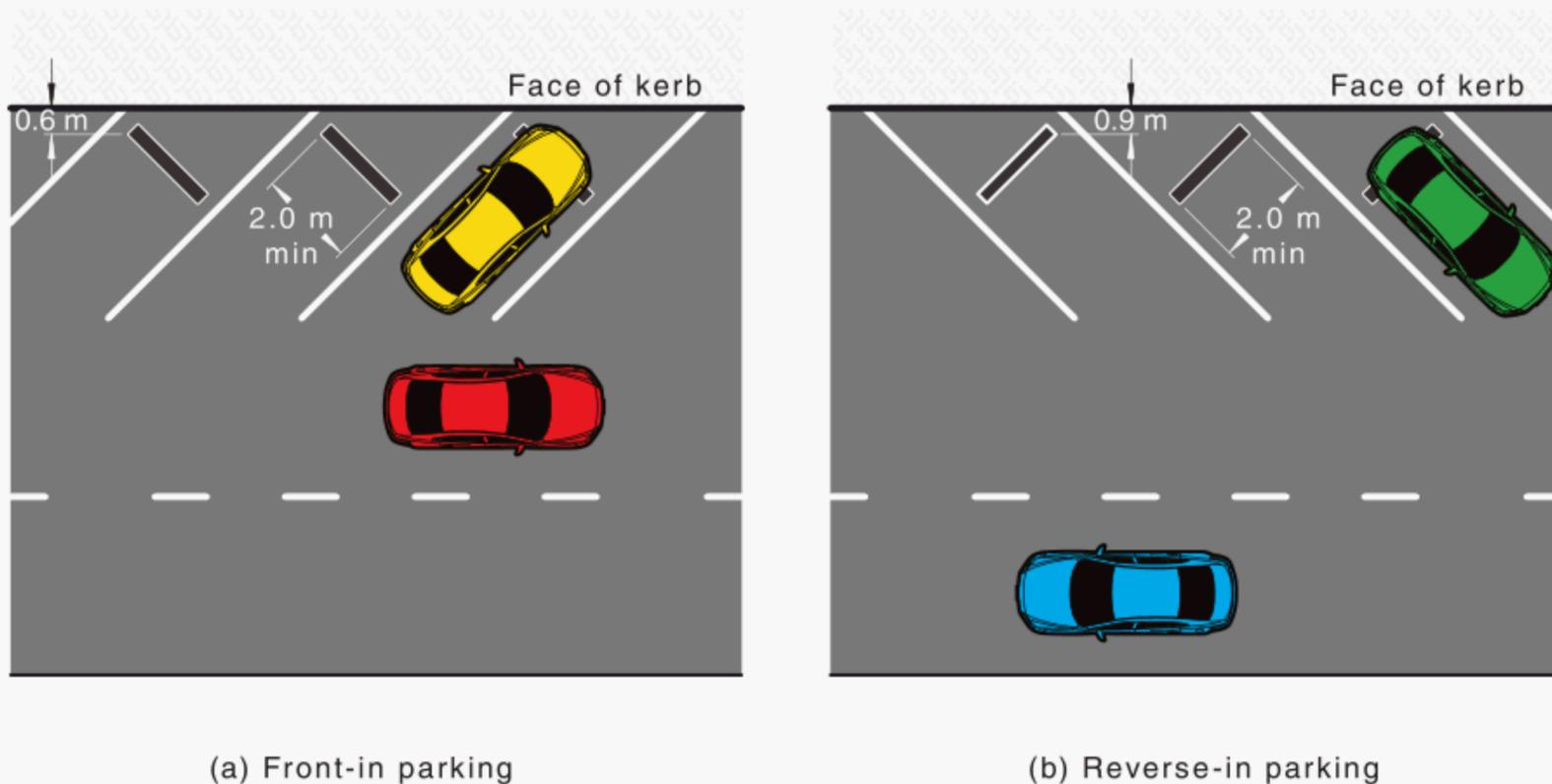


Figure 2.2 — Parking wheelstop location

Where parking is permitted adjacent to a median or separator, a clear and level footpath with a width of at least 1200 mm should be provided along the median or separator between two lines of parked cars, or between a line of parked cars and the far side of the median or separator (see [Figure 2.3](#)).

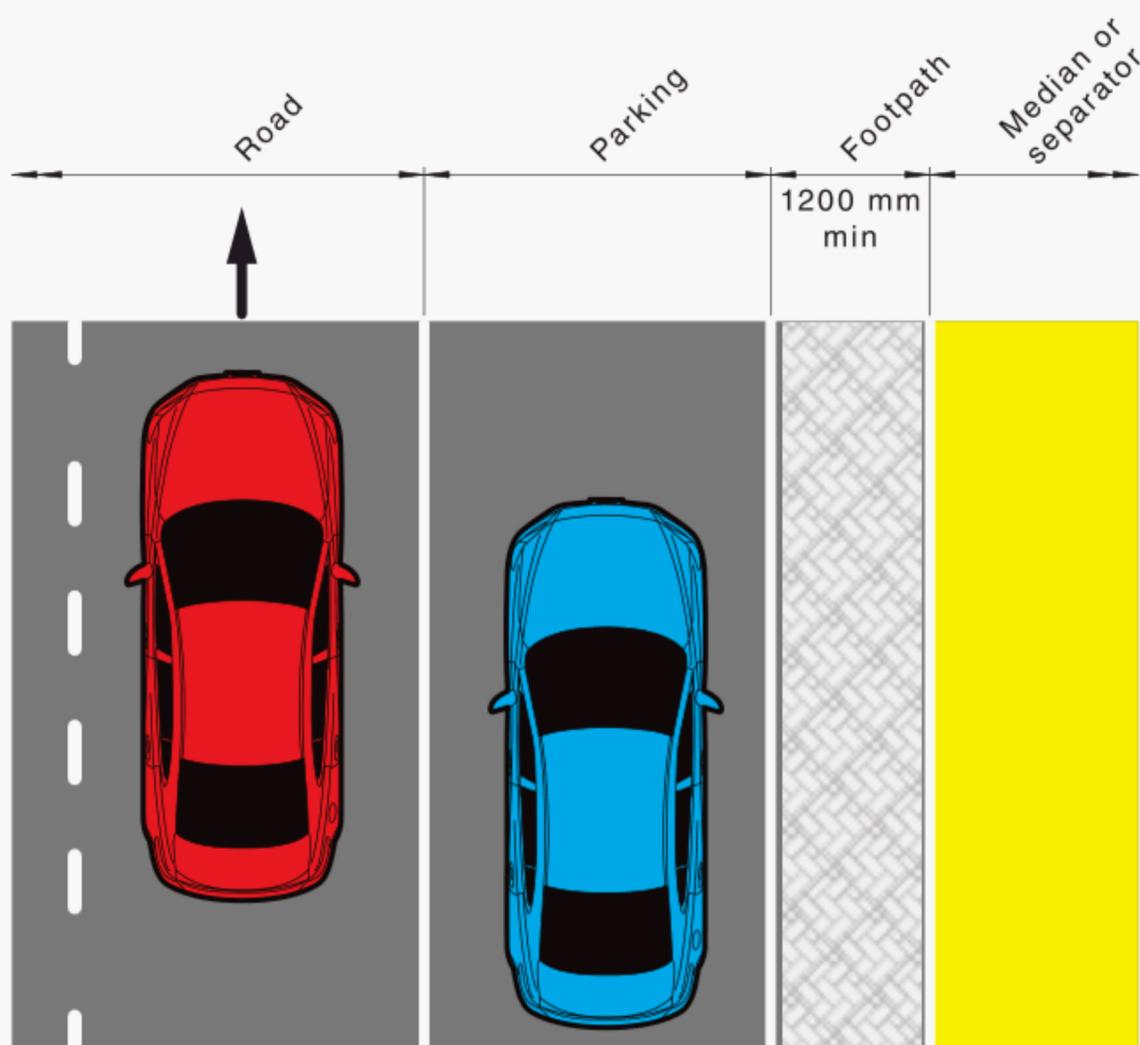


Figure 2.3 — Separation between median and parking

Where a cycleway is provided on the kerb side of on-street car parking, a physical separator shall be provided (kerb, verge, frangible bollard or other) to delineate the parking space from the cycleway and to provide a refuge for people exiting motor vehicles (see [Figure 2.4](#)).

The width of the separator is specified in the *Austrroads Guide to Traffic Management*, the *Austrroads Guide to Road Design* and in design instruments from the road authorities. The width of the separator may need to be increased in areas of high pedestrian activity on the refuge, such as school drop-off zones, beachside precincts, shopping precincts and loading zones including allowances for the storage and handling of goods and equipment. Particular attention to detail is required with regard to the travel direction of cyclists relative to the direction of the parked vehicles, parking turnover and vehicle occupancy.

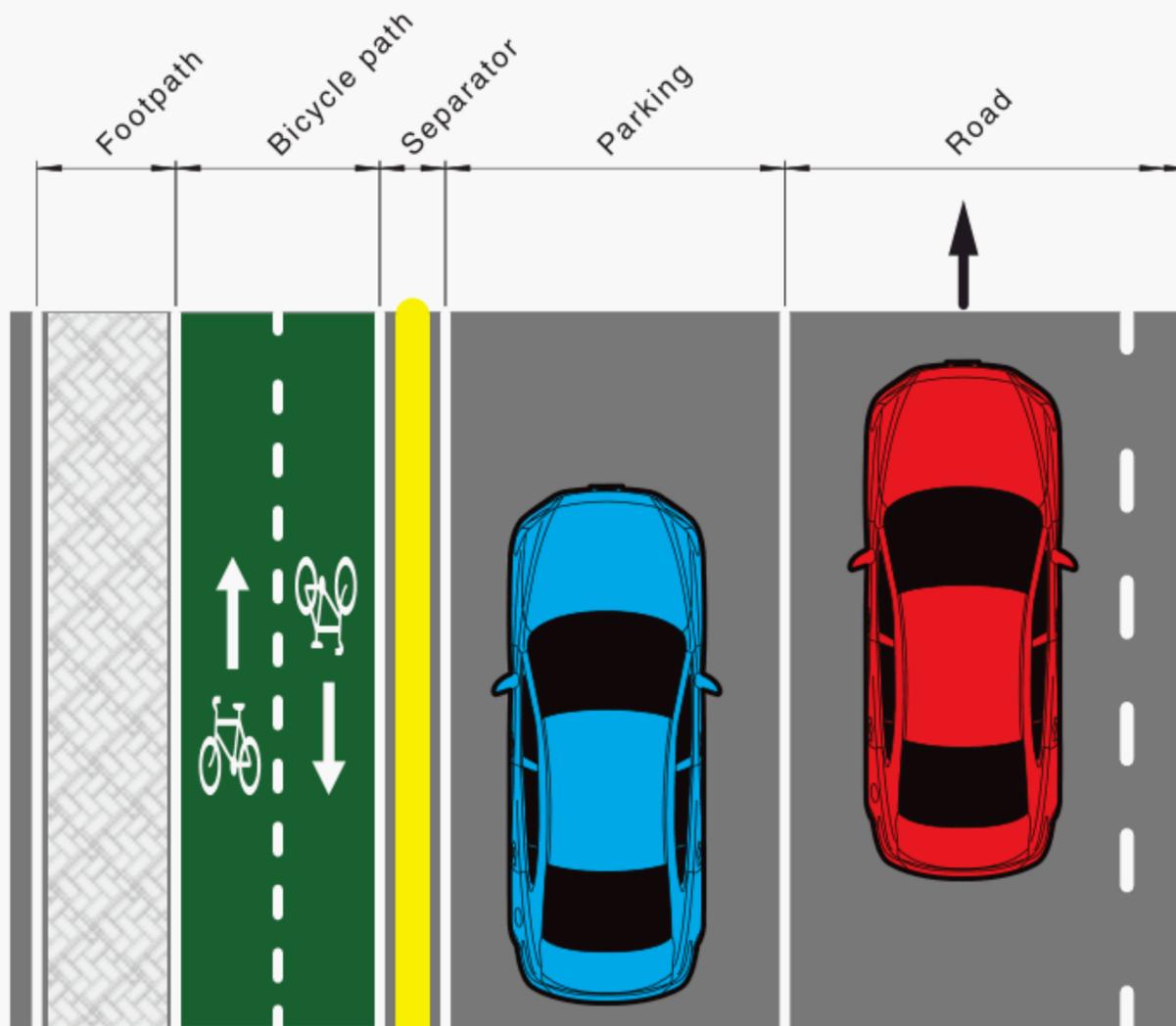


Figure 2.4 — Separation between bicycle path and parking

2.5 Unsafe parking locations

The following locations are generally considered to be unsafe for parking and should not be used:

- (a) On the inside of the sharp curves. It will often be difficult to protect such a parking zone from oncoming traffic, and the hazard will usually be greater if the zone is only partly occupied.
- (b) Within a T-junction, opposite a high-volume or high-speed terminating road, or a terminating road on a steep downgrade. Hazards can include vehicles over-running the intersection or misjudging the turning path. People entering or leaving a vehicle on the driver's side are especially vulnerable.
- (c) Any of the locations listed in [Clause 2.6.1](#) which cannot be protected.

The sources of possible hazard include obstruction of intersection sight distance for moving traffic, movements into and out of parking spaces in unexpected locations, reductions in the effective width of moving traffic lanes and hazardous pedestrian movements.

2.6 On-street parking hazards and safety measures

2.6.1 Hazards

There will be many instances where the provision of on-street parking may be unsafe or where safety measures need to be taken. Such instances include —

- (a) kerbside parking part way around a left-hand curve with limited sight distance across the curve;
- (b) parking just beyond a crest;

- (c) a parking area which starts just beyond a roadway narrowing or lane reduction;
- (d) parking on the right-hand side of a one-way roadway; or

Any other location where a parking zone protrudes significantly into a roadway (this is particularly true of angle parking).

2.6.2 Safety measures

Potential safety measures to guide moving traffic away from and past the parking zone may include —

- (a) edge lines or transition lines (refer to AS 1742.2), supplemented with raised pavement markers;
- (b) edge lines or transition lines supplemented with pavement bars; or
- (c) short kerb extensions at the leading end, or at both ends of the parking zone.

Other safety measures may include reduced speed limits, street lighting, traffic calming, parking restrictions and warning signs.

NOTE Kerb extensions may be used for a combination of purposes, including a pedestrian crossing approach, bicycle parking area, landscaping area, and as a component of a slow point (refer to AS 1742.13). Appropriate steps would need to be taken to adequately delineate such kerb extension, with particular attention being given to making them visible to moving traffic at times when the parking zone is empty.

2.7 Lighting

Performance and installation design requirements for the lighting of urban roads shall be in accordance with the AS/NZS 1158 series.

Section 3 Parking arrangements and bay dimensions for cars and light commercial vehicles

3.1 General

The types of parking which can be permitted on a through roadway will depend on the width of roadway, traffic volumes and speed environment. Restrictions on parking related to some functional classifications of road or abutting land uses may also be applied.

On-street parking generally comprises three types: parallel kerbside, angle kerbside and centre of road.

3.2 Parallel parking

3.2.1 General

Parallel kerbside parking in the direction of traffic flow is the basic method of parking provided for in regulations. It presents, under properly controlled conditions, the least impediment to the orderly and regular flow of traffic along a road.

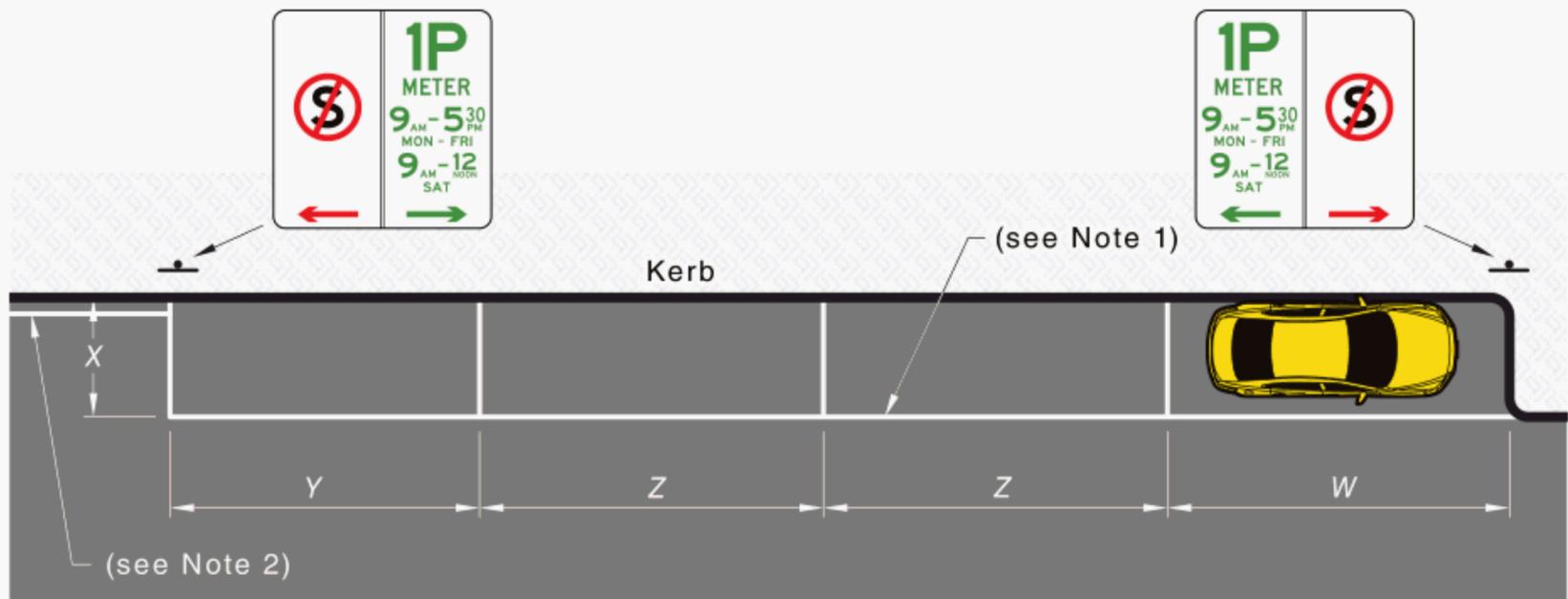
3.2.2 Dimensions and layout of parking spaces

[Figure 3.1](#) shows typical layouts of parallel parking spaces. The minimum width of these spaces for various road speed limits is given in [Table 3.1](#).

To provide orderly parking the road authority may decide to mark parking spaces in areas of high demand and turnover. Pavement markings shall be in accordance with AS 1742.11, which also details pavement messages that may be marked on the road to supplement parking sign controls and help users to recognize the applicable parking restrictions.

Table 3.1 — Width of parallel parking spaces for cars and light commercial vehicles

Speed limit km/h	Space width range m	Safety buffer m	Total width (X) m
50 or less	2.0 to 2.3	0	2.0 to 2.3
60	2.0 to 2.3	0.5	2.5 to 2.8
70	2.0 to 2.3	1.5	3.5 to 3.8
80 or more	On street parking not recommended		



Key

- X = width of space including safety buffer
- Y = length of end space where vehicles may enter or leave the space directly — 5.4 m min
- Z = length of intermediate space — 6.0 m to 6.7 m, depending on parking turn over and traffic volume (see Note 3)
- W = length of end space which is obstructed at one end by a kerb or barrier — 6.3 m or length Z of adjacent space, whichever is the greater

NOTE 1 Space markings may be broken or unbroken. Unbroken longitudinal space markings can assist in the guidance of traffic past parking spaces.

NOTE 2 “No Stopping” restrictions may be supplemented by a yellow line 80 mm to 100 mm wide, close to the kerb.

NOTE 3 Where parking turnover is high and vehicles reversing into parking spaces cannot be readily tolerated, increased space lengths, up to 8 m, should be considered.

NOTE 4 For accessible parallel parking, see [Clause 4.5](#).

Figure 3.1 — Typical parallel parking layout for cars

3.3 Angle parking

3.3.1 General

Angle parking can generally accommodate up to twice as many vehicles per unit length of kerb as parallel parking. Small angles (30° or less) give little advantage over parallel parking, especially where there are frequent driveways or other kerb interruptions. The maximum advantage occurs at 90°.

The use of angle kerbside parking may therefore need to be considered in conjunction with other measures designed to lessen the adverse effects.

The parking manoeuvre is generally more easily accomplished with angle parking than with parallel parking, and is easier with small angles than with large. As the angle of parking increases so does the width of roadway which is required for parking and unparking manoeuvres. 90° is the only angle suitable for access from both approach directions.

Angle parking may be either “front-in” or “reverse-in”, subject to regulation.

When proposing the use of reverse-in angle parking, consideration should be given to potential hazards associated with vehicles stopping in the moving traffic stream prior to reversing into a parking space, and with nose swing into the adjacent through traffic lane as each vehicle starts its back-in manoeuvre.

When proposing the use of front-in angle parking, consideration should be given to potential hazards associated with vehicles reversing into the moving traffic stream without clear visibility, which is also a particular concern for cyclists.

The hazards of angle parking are of most concern where moving lanes are narrow and lane traffic volumes are high.

Long vehicles are usually unable to make use of angle parking spaces. In commercial areas, for example, adequate parallel loading spaces should also be provided to cater for long vehicles and commercial vehicles.

3.3.2 Angle parking space use classification

Angle parking space widths relate to the frequency of parking and unparking manoeuvres. [Table 3.2](#) shows the classification of on-street angle parking based on that developed for AS 2890.1 for off-street parking.

Table 3.2 — Classification of on-street angle parking facilities

Class	Typical uses
Low	Generally all-day parking, e.g. commuter parking
Medium	Generally more than 2 h parking but less than a full day, e.g. town centre, sports facility, airport visitor parking
High	Generally short-term parking, including areas where children and goods are frequently loaded into vehicles, e.g. at shopping centres
Accessible	Parking spaces for people with disabilities (see also Clause 4.5)

3.3.3 Angle parking layout

Where angle parking is proposed there are several factors that require consideration of the design angle of the parking layout. (See [Figure 3.2](#).) The first consideration is the road width, which is reflected in [Table 3.3](#), [Table 3.4](#) and [Table 3.5](#), along with various combinations of traffic flow, traffic speed and usage. Once it is established that adequate road width is available, a more detailed design is required using the tables in [Appendix A](#).

[Table 3.3](#) allows for manoeuvring space to extend into the adjacent traffic lane in low speed, low volume environment. Assessment of the viability of angle parking shall take account of any safety implications from the circumstances of the specific location.

For allowances relating to encroachment onto pedestrian or bicycle paths, see [Clause 2.4](#).

For the design of accessible parking, see [Clause 4.5](#).

NOTE 1 Roads and parking spaces are typically free from line marking.

NOTE 2 Supplementary traffic calming may be required to create a safe manoeuvring environment.

NOTE 3 Widths of 30° angle parking spaces are smaller than other angle parking spaces due to reduced conflict of open doors against adjacent vehicles.

NOTE 4 Reverse-in angle parking spaces angle in the opposite direction.

NOTE 5 Angle parking is not recommended on roads with speed limits above 60 km/h or where one-way traffic volumes are above 800 vehicles/hour.

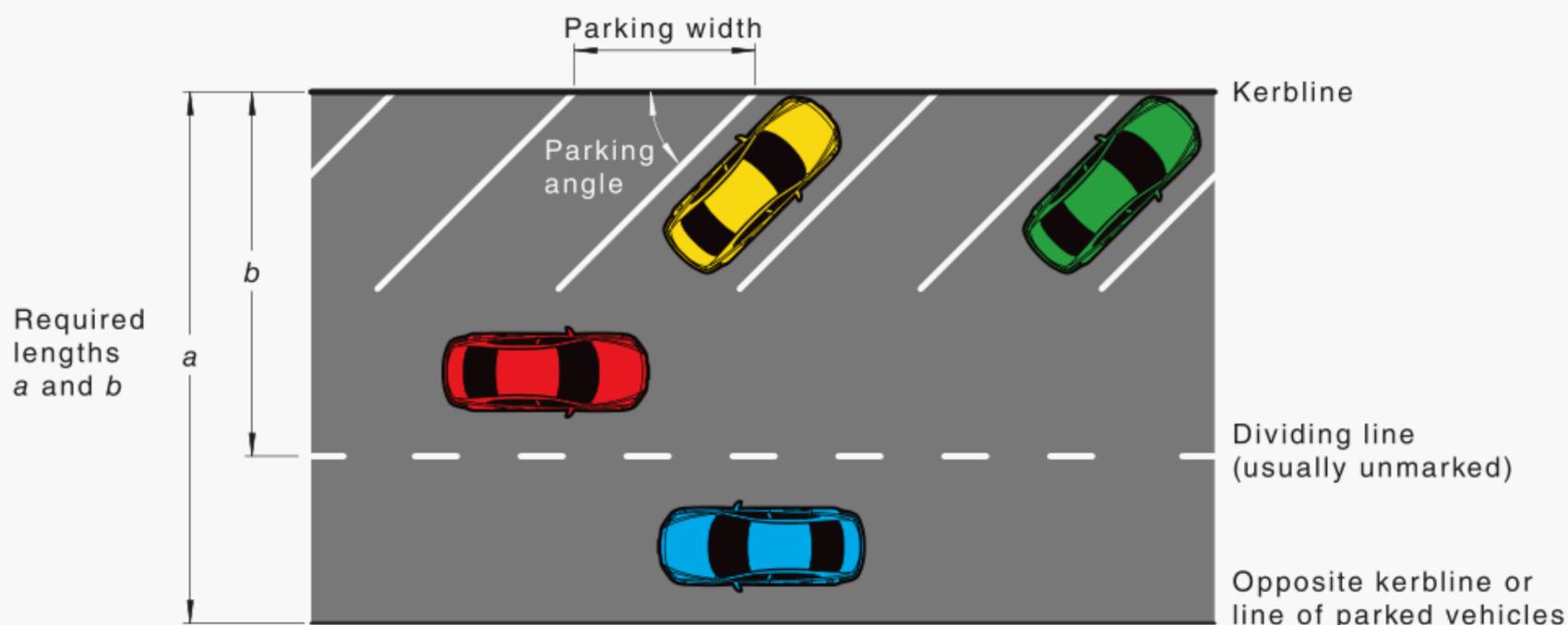


Figure 3.2 — Angle parking parameters

Table 3.3 — Parking space dimensions for angle parking on roads with speed limit 50 km/h or less and less than 200 vehicles/hour

Use classification (see Table 3.2)	30° angle parking			45° angle parking				60° angle parking				90° angle parking				
	Low	Med	High	Low	Med	High	Acc	Low	Med	High	Acc	Low	Med	High	Acc	
Required width	4.2	4.6	5.0	3.4	3.5	3.7	3.4	2.8	2.9	3.0	2.8	2.4	2.5	2.6	2.4	
Required length (see Note 1)																
L1 = park to wall or high kerb (>150 mm), no overhang	7.5	7.4	7.3	9.1	8.9	8.7	8.7	10.6	10.3	10.0	10.0	11.6	11.2	10.8	10.8	
L2 = park to low kerb (not >150 mm), 600 mm overhang	7.2	7.1	7.0	8.7	8.5	8.3	8.3	10.0	9.7	9.4	9.4	11.0	10.6	10.2	10.2	
L3 = park to wheel stops at right angles to parking direction	7.6	7.7	7.8	9.4	9.3	9.2	9.2	10.8	10.6	10.3	10.3	11.6	11.2	10.8	10.8	
NOTE 1 Either (a) the distance from kerb line to opposite side of road for <200 vehicles/hour in any given hour in both directions, or (b) the distance from kerb line to dividing line for other traffic volumes. Both (a) and (b) include manoeuvre space.																
NOTE 2 For further details on dimensions and additional shared area for accessible parking see Clause 4.5 .																

Table 3.4 — Parking space dimensions for angle parking on roads with speed limit 60 km/h and less than 200 vehicles/hour one-way

Use classification (see Table 3.2)	30° angle parking			45° angle parking				60° angle parking				90° angle parking			
	Low	Med	High	Low	Med	High	Acc	Low	Med	High	Acc	Low	Med	High	Acc
Required width	4.2	4.6	5	3.4	3.5	3.7	3.4	2.8	2.9	3	2.8	2.4	2.5	2.6	2.4
Required length (see Note 1)															
L1 = park to wall or high kerb (>150 mm), no overhang	8.0	7.9	7.8	9.6	9.4	9.2	9.2	11.1	10.8	10.5	10.5	12.1	11.7	11.3	11.3
L2 = park to low kerb (not >150 mm), 600 mm overhang	7.7	7.6	7.5	9.2	9.0	8.8	8.8	10.5	10.2	9.9	9.9	11.5	11.1	10.7	10.7
L3 = park to wheel stops at right angles to parking direction	8.1	8.2	8.3	9.9	9.8	9.7	9.7	11.3	11.1	10.8	10.8	12.1	11.7	11.3	11.3
NOTE 1 Distance from kerb line to dividing line (includes manoeuvre space).															
NOTE 2 For further details on dimensions and additional shared area for accessible parking see Clause 4.5 .															

Table 3.5 — Parking space dimensions for angle parking on roads with speed limit 60 km/h or less and from 200 to 800 vehicles/hour one way

Use classification (see Table 3.2)	30° angle parking			45° angle parking				60° angle parking				90° angle parking			
	Low	Med	High	Low	Med	High	Acc	Low	Med	High	Acc	Low	Med	High	Acc
Required width	4.2	4.6	5.0	3.4	3.5	3.7	3.4	2.8	2.9	3.0	2.8	2.4	2.5	2.6	2.4
Required length (see Note 1)															
L1 = park to wall or high kerb (>150 mm), no overhang	11.0	10.9	10.8	12.6	12.4	12.2	12.2	14.1	13.8	13.5	13.5	15.1	14.7	14.3	14.3
L2 = park to low kerb (not >150 mm), 600 mm overhang	10.7	10.6	10.5	12.2	12.0	11.8	11.8	13.5	13.2	12.9	12.9	14.5	14.1	13.7	13.7
L3 = park to wheel stops at right angles to parking direction	11.1	11.2	11.3	12.9	12.8	12.7	12.7	14.3	14.1	13.8	13.8	15.1	14.7	14.3	14.3
NOTE 1 Distance from kerb line to dividing line (includes manoeuvre space).															
NOTE 2 For further details on dimensions and additional shared area for accessible parking see Clause 4.5 .															

3.4 Centre-of-road parking

3.4.1 General

Unprotected centre-of-road parking should be considered only in streets with little through traffic and where all traffic moves slowly. The central line of parked vehicles separates opposing traffic flows and provides a continuous refuge for pedestrians, but this type of parking generates additional pedestrian movements across the road.

It is essential that adequate visibility be preserved at intersections. Hazardous conditions would be brought about by permitting centre-of-road parking too close to the cross-street traffic lanes.

A combination of kerbside parking and centre-of-road parking provides a large number of street parking spaces per unit length of street. Angle kerbside parking is rarely possible where centre-of-road parking is permitted.

If time limits are introduced, the combination of kerbside and centre-of-road parking allows time limits of different periods and durations to be instituted on the road. Short-term parking demands at the kerbside may be satisfied by imposing a time limit of, say, half an hour or less on parking. Longer limits may be set in the centre-of-road parking zone to accommodate drivers requiring longer parking periods. This arrangement minimizes turnover of parking in the centre of the road.

3.4.2 Roadway width requirements

Table 3.6 gives a guide to the minimum roadway width, related to the speed limit and traffic volume, which should be available before centre-of-road parking is permitted. Centre-of-road parking shall not be available on roads with speed limits above 50 km/h or where one-way traffic volumes are above 200 vehicles/hour.

Table 3.6 — Centre-of-road parking — Minimum roadway width

Speed limit km/h	One-way traffic flow veh/h	Minimum roadway width m
40 or less	Less than 100	20.2
50	Less than 100	22.2
40 or 50	100 to 200	28.2

NOTE 1 This Table is applicable to a two-way roadway with 2.0 m kerbside parallel parking both sides and 5.4 m long, 90°, 2.6 m wide centre-of-road parking bays.

NOTE 2 Angles other than 90° are not normally suitable for centre-of-road parking and would require site-specific traffic management arrangements.

NOTE 3 Kerbside parallel parking widths may need to be increased to allow for accessible parking, loading zones, bus stops, etc.

NOTE 4 Ease of manoeuvring into and out of the centre-of-road parking facilities may be improved by bay widths greater than 2.6 m. Centre-of-road bay widths less than 2.6 m may require greater road widths (see [Appendix A](#)).

NOTE 5 Roads and parallel parking spaces are typically free from line marking. Centre-of-road parking usually requires the bays to be marked.

NOTE 6 Centre-of-road bays usually require protection by painted or constructed medians.

3.5 Alternative layouts

Where overall roadway widths are sufficient to allow centre-of-road or angle parking, a parking area isolated from through traffic is preferred. Such facilities shall be designed in accordance with AS 2890.1.

Section 4 Provision for special groups

4.1 General

The following special groups of vehicle type or user may need to be catered for in on-street parking provisions:

- (a) Large vehicles (see [Clause 4.2](#)).
- (b) Taxis (see [Clause 4.3](#)).
- (c) Motorcycles (see [Clause 4.4](#)).
- (d) People with disabilities (see [Clause 4.5](#)).
- (e) Bicycles (refer to AS 2890.3).

4.2 Large vehicles

4.2.1 General provisions

The long-term kerbside parking of large vehicles (other than light commercial vehicles) on-street is generally discouraged, often by law. Wherever there is a need for large vehicles to be parked other than on private property, a parking area physically separated or otherwise remote from the through roadway should be sought. For the requirements of such a facility, refer to AS 2890.2.

In the event that limited kerbside parking is required, parallel parking is the only practicable configuration. Spaces need to be made long enough to accommodate the vehicle and the necessary manoeuvre space for parking and unparking. On-street angle parking for large vehicles is almost never practicable.

4.2.2 Loading zones

Short-term stopping for purposes of loading or unloading goods vehicles is provided for by means of loading zones. They should be provided where it is necessary to allow vehicles to stand for the picking up or setting down of goods. They should allow stopping parallel to the kerb and should have a length which will accommodate the vehicles which normally use them. Bearing in mind the need to locate loading zones close to the premises being served, consideration should be given to placing loading zones at the beginning or end of a section of parking, rather than in the middle, to reduce the need for awkward vehicle manoeuvring, especially the reversing of large vehicles.

4.2.3 Truck zones

In some jurisdictions short-term stopping of heavy goods vehicles is catered for by use of truck zones. The usage and legal requirements relating to truck zones are similar to those for loading zones, except that time limits may not apply provided the vehicle is loading or unloading.

4.2.4 Parking space width and length

The minimum width of parallel parking spaces for various road speed limits is given in [Table 4.1](#).

The length of the space shall allow for the length of the design vehicle, the number of such vehicles, and their draw in and draw out requirements.

Table 4.1 — Width of parallel parking spaces for large vehicles

Speed limit km/h	Space width m	Safety buffer m	Total width m
50 or less	2.6	0	2.6
60	2.6	0.5	3.1
70	2.6	1.5	4.1
80 or more	On street parking not recommended		

4.3 Taxi stands and feeder stands

It is desirable that taxis stand parallel to the kerb, facing in the direction of the main traffic stream so that waiting taxis may progress from the tail of the taxi queue to the head. Minimum length of taxi stands should be $(5.4n + 1.0)$ metres, where n is the number of taxis to be accommodated.

Consideration should be given to accommodate accessible taxis including space length and kerb ramps.

Should there be a demand for greater allocation of space at any particular location, the main stands should be fed from feeder stands established at a reasonable distance from the main stand. The feeder stand should be so placed that the lead taxi can observe when a space becomes vacant at the main stand. A feeder stand may feed one or more main stands.

4.4 Motorcycles

Providing motorcycle parking reduces the need for motorcycles to park in car spaces improving the efficient use of the available space. Conversion of car parking spaces as illustrated in [Figure 4.1](#) can provide the required facilities.

Where motorcycle parking spaces are marked the size shall be 1.0 m wide by 2.0 m long. This applies to both parallel and angle parking.

NOTE 1 See parking dimension recommendations in *IHIE Guidelines for Motorcycling*.

NOTE 2 Motorcycle parking may be more efficient if individual spaces are not marked allowing more motorcycles to use the available space.

NOTE 3 Where the space available for car parking would allow for oversize car spaces an alternative option of using that space for motorcycle parking should be considered.

Surface grades should be less than 1 in 20 (5 %) to avoid parked motorcycle capsizing.

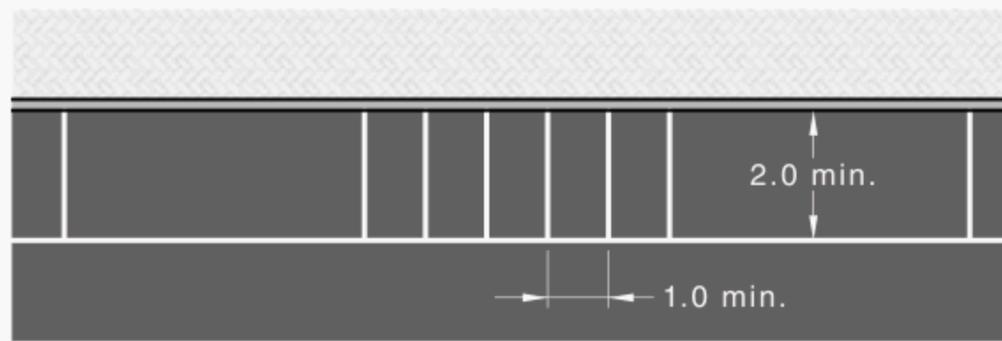
To support the weight of the motorcycle, the surface needs to be capable of carrying a load of 10 kg/cm² to avoid penetration by the stand.

Small areas that would otherwise be unused for car parking should be used for motorcycle parking. Consideration should be given to access path to these spaces including kerb ramps and path width.

Where sight distance for road users is a factor, for example, before and after intersections and pedestrian crossings, motorcycle parking in preference to carparking should be provided as both drivers and pedestrians can see over the parked motorcycles. This concept also works for driveways and other entrances where vehicles regularly cross the footpath or bicycle path.

Motorcycles parked on the footpath should be no closer than 2 m to the building line, 600 mm to the kerb and within 1 m of essential services.

Dimensions in metres



(a) Parallel parking zone



(b) Angle parking zone (see Note)

NOTE In angle parking zones, only car spaces at the ends can be converted, and then only if roadway crossfall is not too steep.

Figure 4.1 — Conversion of a car parking space to motorcycle spaces

4.5 Parking for people with disabilities

4.5.1 General requirements

Within the overall provision of on-street parking a number of accessible parking spaces for people with disabilities should be allocated.

The recommended number of accessible spaces should have regard to the types of land uses, traffic volumes, stated speed limits, roadway widths and topography of the locality. See [Table 4.2](#) for recommended proportions relevant to adjacent land uses and development.

Accessible on-street parking is not recommended for roadways with speed limits exceeding 50 km/h or two way traffic volumes exceeding 200 vehicles per hour. It is also not recommended for 30° angle parking.

For angled parking a shared area of a minimum 2.4 m width should be provided between accessible parking spaces. This shared area should be so marked and bollards placed on it to prevent it being used as a parking space. Where there is a single accessible parking space it should be located at the end of the parking area together with a shared area. In this case, the space may be widened to 3.2 m for ease of access and the shared area may then be reduced to 1.6 m with the total width of the space and shared area remaining at 4.8 m (see [Figures 4.5](#) to [Figure 4.7](#)).

[Figures 4.5](#) to [Figure 4.7](#) depict 45° angle parking. However, the dimensions and arrangement of shared areas shown apply for all angled parking.

The design of accessible on-street parking in non-residential areas shall be provided in accordance with [Figure 4.2](#) to [Figure 4.7](#).

The design of accessible on-street parking in residential areas shall be provided in accordance with [Figure 4.2](#) to [Figure 4.7](#) unless the available space cannot fully achieve these dimensions. In such cases a local authority may install the most accessible design to suit the conditions.

Accessible on-street parking should be located in —

- (a) close proximity to any particular establishments which people with disabilities are likely to use; and
- (b) areas where safe and accessible paths of travel from the accessible parking spaces to the adjoining developments is achievable.

Requirements and guidance on accessible paths of travel for people with disabilities are also provided in AS 1428.1.

Table 4.2 — Recommended minimum number of accessible spaces by land use

Type of development and land use	Recommended minimum number of accessible spaces
Retail/commercial	2 %
Public transport	2 %
Community facilities, libraries, galleries, places of worship	2 %
Senior citizens centres, clubs and residential care facilities	3% to 4 %
Medical centres, services and hospitals	3% to 4 %
Tertiary education institutions	1% to 2 %
Entertainment centres, function centres	2 %
Outdoor sporting facilities and outdoor recreation areas	1% to 2 %

4.5.2 Parking space design requirements

Parking spaces for use by people with disabilities shall conform with the following:

- (a) *Pavement requirements* — A parking space shall consist of an unobstructed area having a firm plane surface, all at the one level, with a fall not exceeding 1:40 in either the direction of parking or at 90° to it, or 1:33 if the surface has a bituminous seal.
- (b) *Provision of kerb ramps* — Accessible parking spaces and shared areas shall incorporate kerb ramps to access pedestrian footpaths in accordance with AS 1428.1. See [Figure 4.2](#) to [Figure 4.7](#) for examples.
- (c) *Provision of accessible path of travel* — A continuous, accessible path of travel in accordance with AS 1428.1 shall be provided between each parking space and the adjacent footpath.
- (d) *Signs* — Parking spaces shall be identified by a parking control sign incorporating the international symbol of access for people with disabilities (refer to AS 1742.11).
- (e) *Pavement markings* — Parking spaces shall be marked in accordance with AS/NZS 2890.6 except where a shared area is on a footpath.
- (f) *Headroom* — The headroom for each accessible parking space shall be at least 2.5 m.

Dimensions in metres

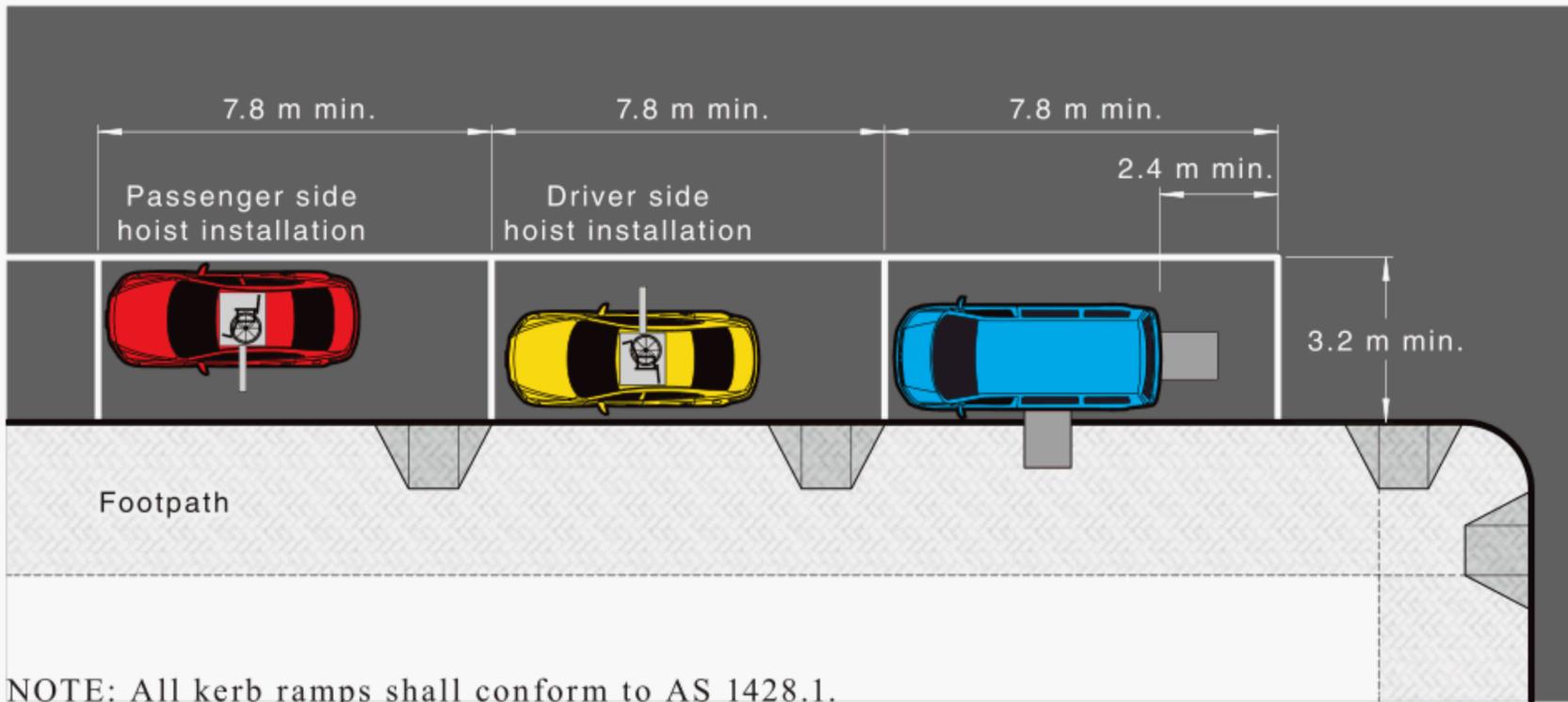


Figure 4.2 — Examples of accessible parallel parking without kerb extensions

Dimensions in metres

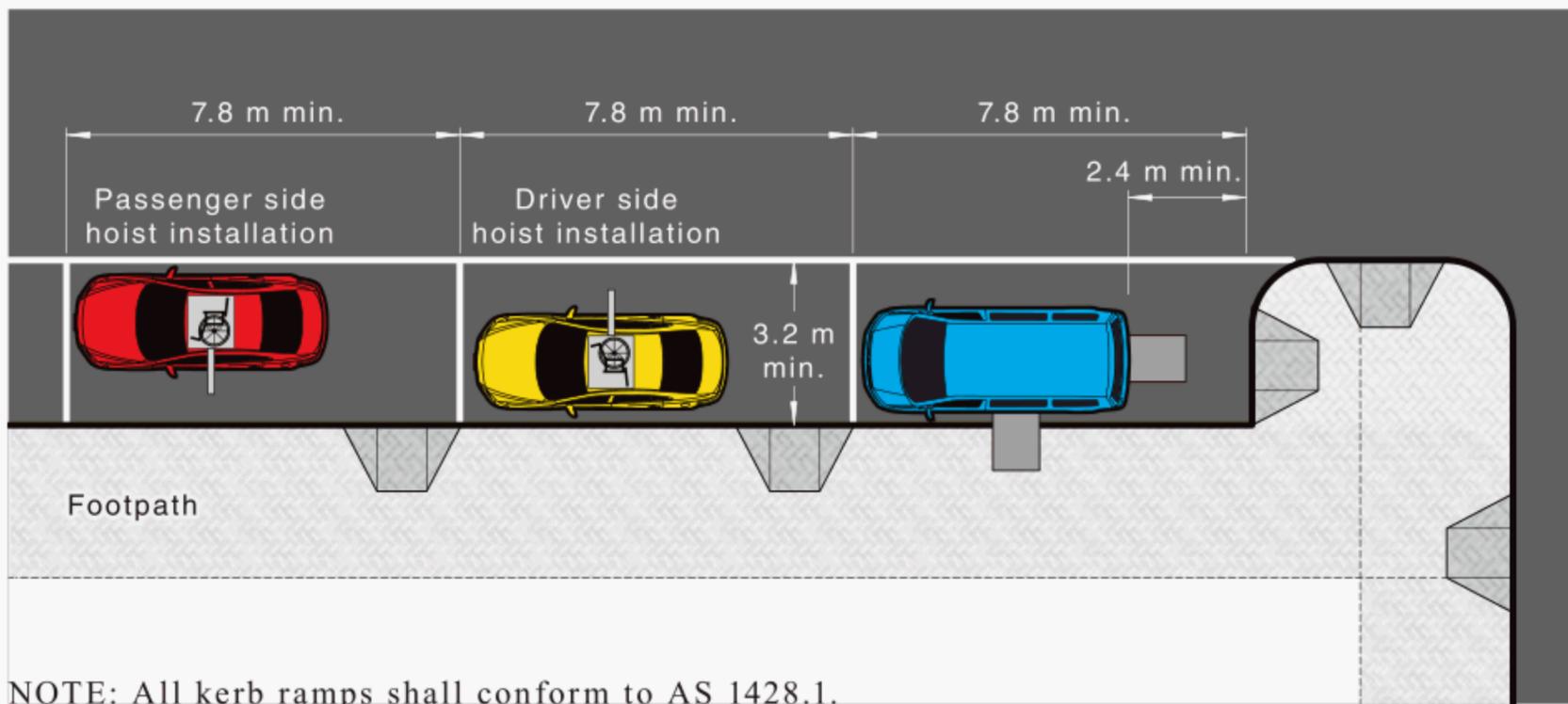
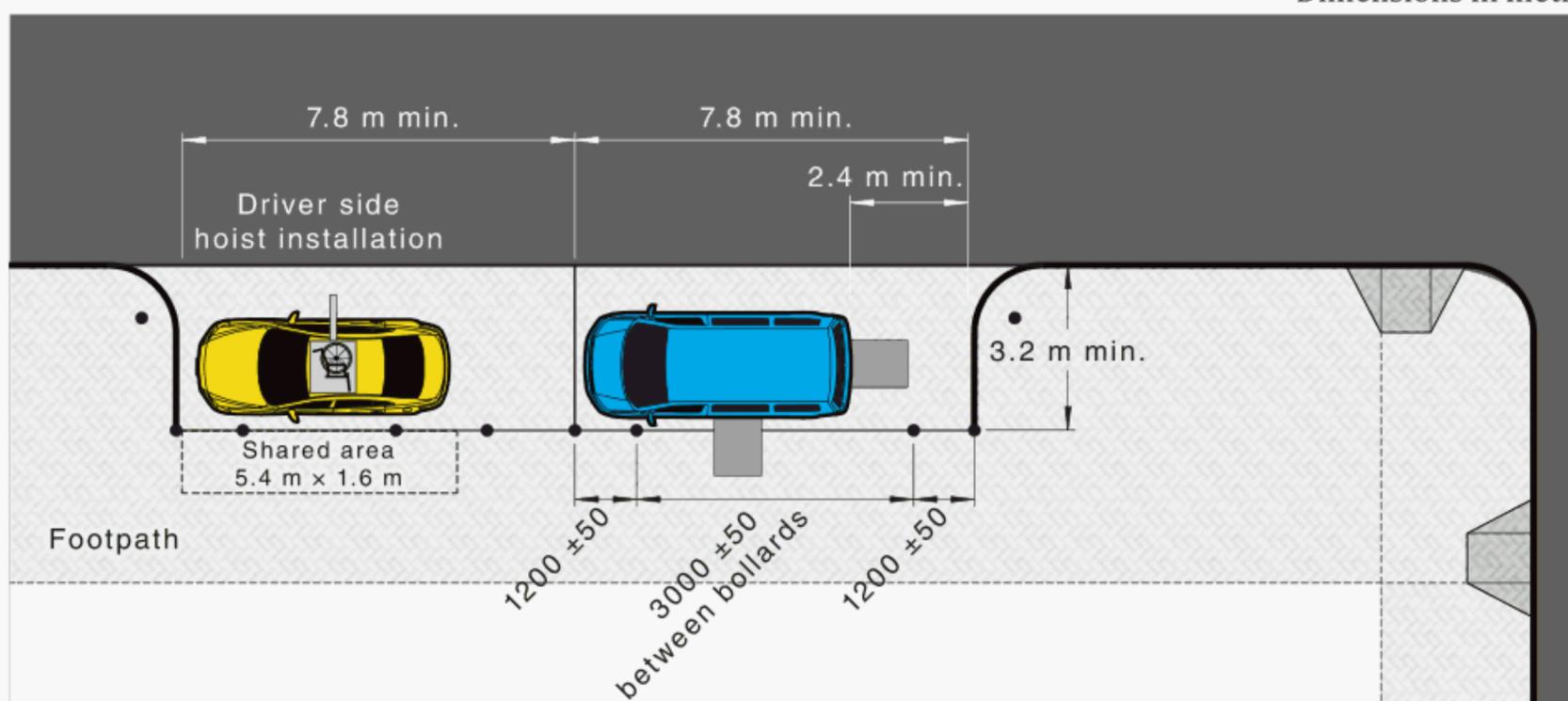


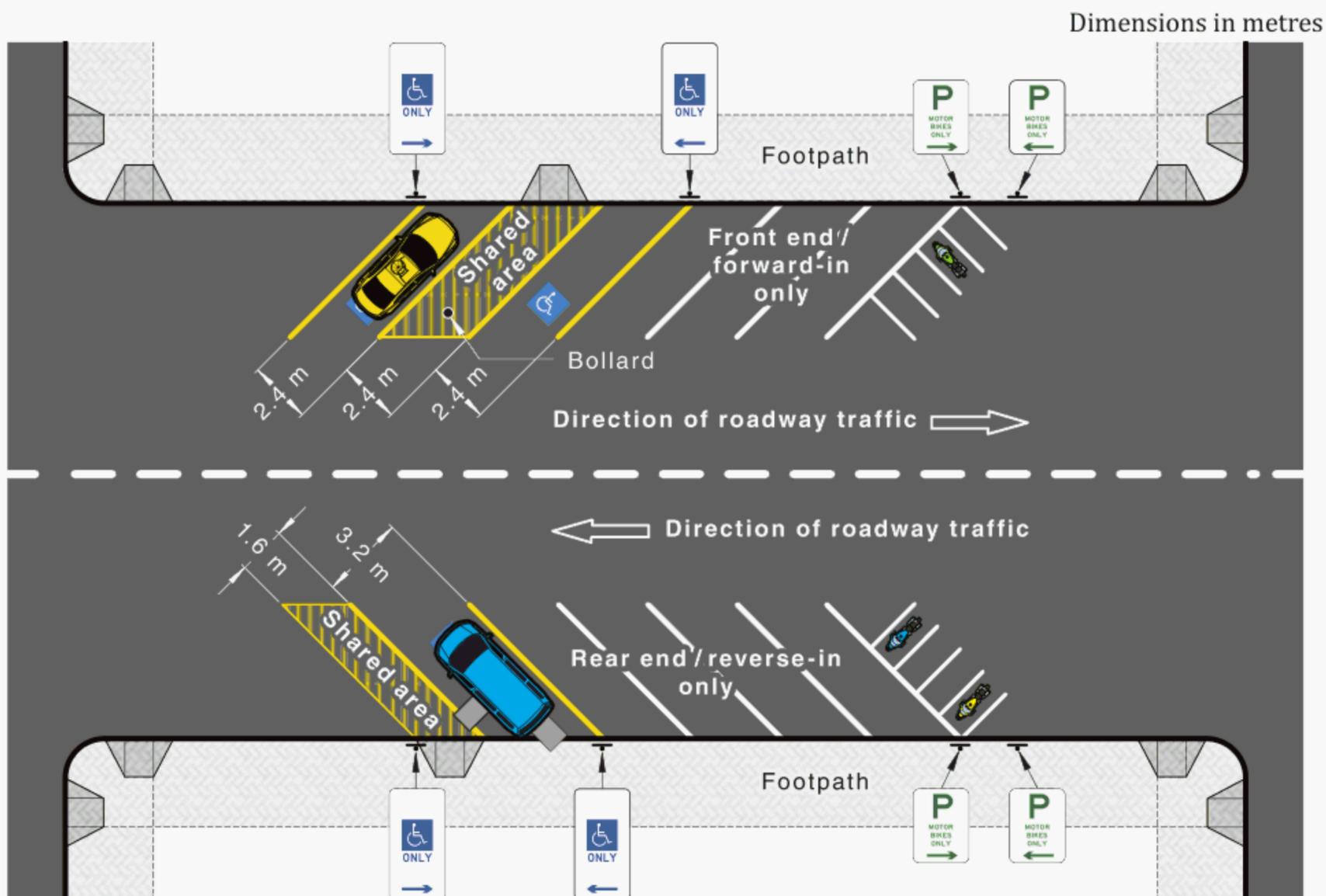
Figure 4.3 — Examples of accessible parallel parking with kerb extensions

Dimensions in metres



NOTE: All kerb ramps shall conform to AS 1428.1.

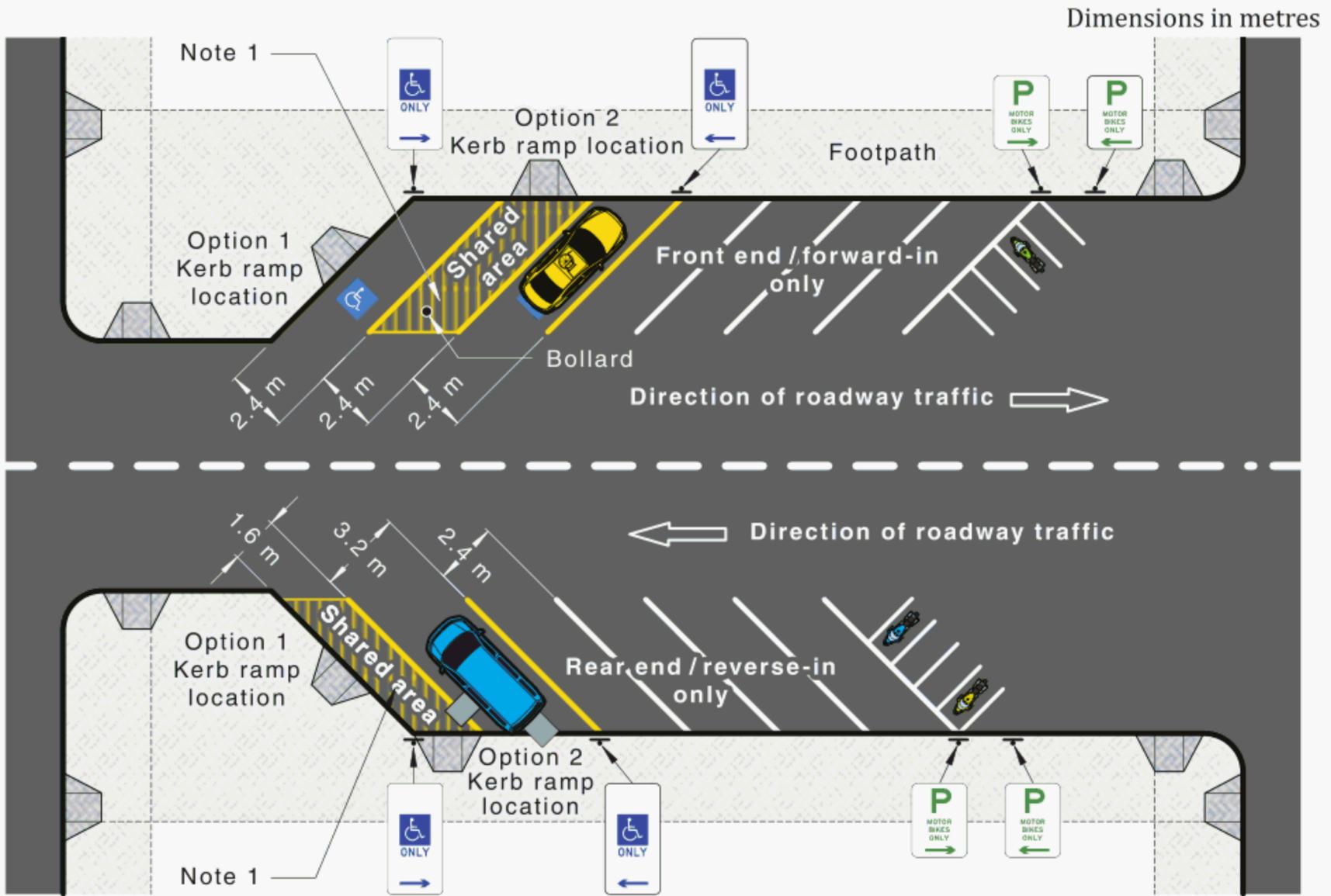
Figure 4.4 — Examples of accessible parallel parking flush with footpath



NOTE:

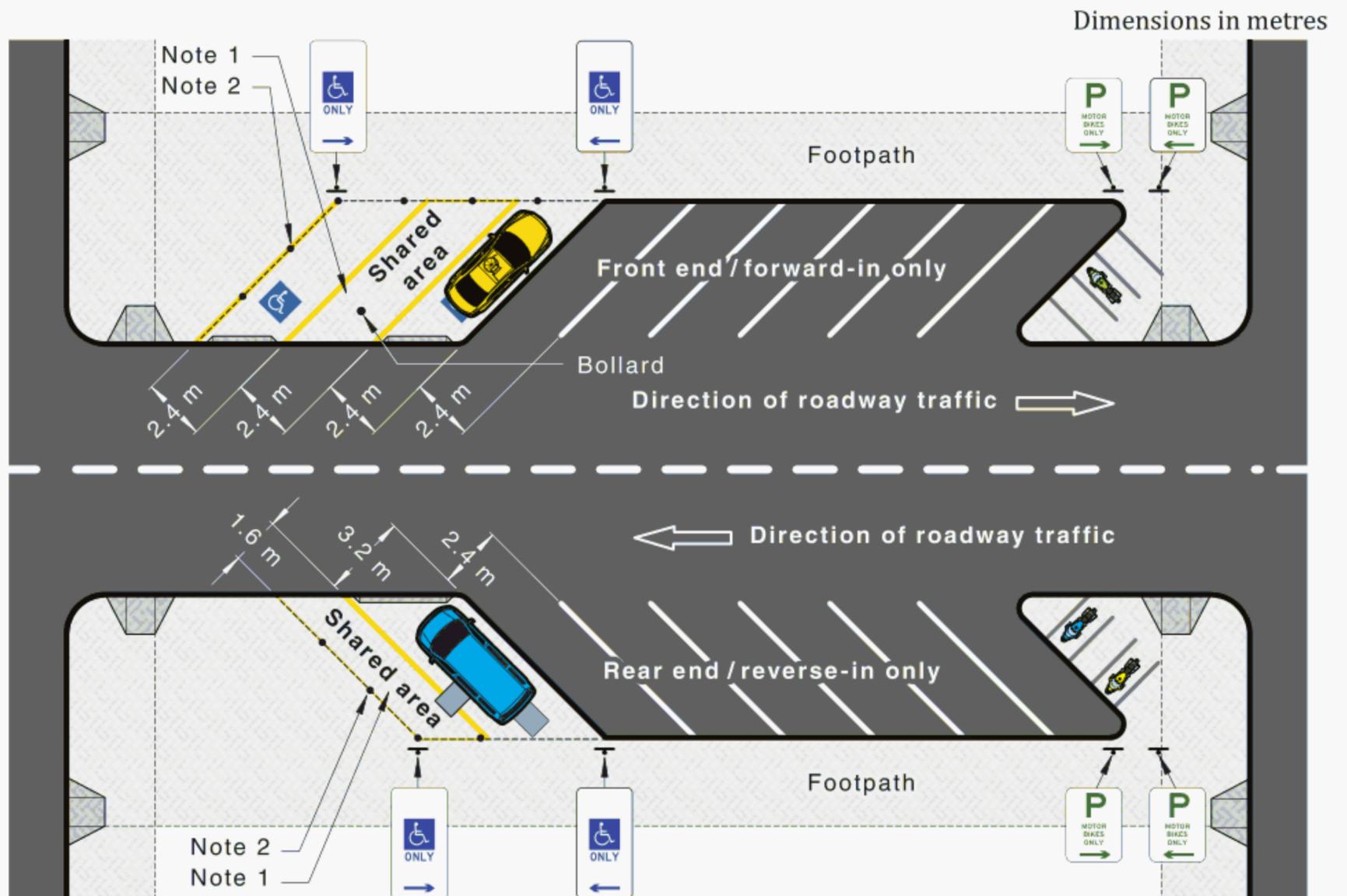
1. Shared area markup required.
2. All kerb ramps shall conform to AS 1428.1.
3. Motor bike parking is not recommended adjacent to shared areas due to potential for encroachment.

Figure 4.5 — Examples of accessible angle parking without kerb extensions



- NOTE:
- 1. Shared area markup required.
 - 2. All kerb ramps shall conform to AS 1428.1.

Figure 4.6 — Examples of accessible angle parking with kerb extensions



NOTE:

1. Shared area markings are not required where the area is located on a pedestrian footpath
2. 1 m min. height bollards installed at 1.5–1.8 m spacing
3. Bollards adjacent to the rear of the vehicle shall not obstruct access to the boot or rear mounted hoist
4. Motorcycles parked on the footpath should be no closer than 2 m to the building line, 0.6 m to the kerb and not within 1 m of essential services

Figure 4.7 — Examples of accessible angle parking flush with footpath

Appendix A (normative)

Angle parking space dimensions

Tables A.1, A.2 and A.3 describe different parking space dimensions for angle parking on roads with differing speed limits and levels of vehicular traffic. Figures A.1 and A.2 provide references for the first column of each table. A worked example for each table using values for 45° parking and low use is shown.

Table A.1 — Parking space dimensions for angle parking on roads with speed limit 50 km/h or less

Use classification (see Table 3.2)	30° angle parking			45° angle parking				60° angle parking				90° angle parking			
	Low	Med	High	Low	Med	High	Acc	Low	Med	High	Acc	Low	Med	High	Acc
Width:															
A — space width	2.1	2.3	2.5	2.4	2.5	2.6	2.4	2.4	2.5	2.6	2.4	2.4	2.5	2.6	2.4
B — space width parallel to kerb	4.2	4.6	5.0	3.4	3.5	3.7	3.4	2.8	2.9	3.0	2.8	2.4	2.5	2.6	2.4
Required width	4.2	4.6	5.0	3.4	3.5	3.7	3.4	2.8	2.9	3.0	2.8	2.4	2.5	2.6	2.4
Length:															
Lateral depth of spaces:															
D1 = park to wall or high kerb (>150 mm), no overhang	4.4	4.4	4.4	5.2	5.2	5.2	5.2	5.7	5.7	5.7	5.7	5.4	5.4	5.4	5.4
D2 = park to low kerb (not >150 mm), 600 mm overhang	4.1	4.1	4.1	4.8	4.8	4.8	4.8	5.1	5.1	5.1	5.1	4.8	4.8	4.8	4.8
D3 = park to wheel stops at right angles to parking direction	4.5	4.7	4.9	5.5	5.6	5.7	5.7	5.9	6.0	6.0	6.0	5.4	5.4	5.4	5.4
M = manoeuvre space	3.1	3.0	2.9	3.9	3.7	3.5	3.5	4.9	4.6	4.3	4.3	6.2	5.8	5.4	5.4
Required length (see Note 1)															
L1 = park to wall or high kerb (>150 mm), no overhang	7.5	7.4	7.3	9.1	8.9	8.7	8.7	10.6	10.3	10.0	10.0	11.6	11.2	10.8	10.8
L2 = park to low kerb (not >150 mm), 600 mm overhang	7.2	7.1	7.0	8.7	8.5	8.3	8.3	10.0	9.7	9.4	9.4	11.0	10.6	10.2	10.2
L3 = park to wheel stops at right angles to parking direction	7.6	7.7	7.8	9.4	9.3	9.2	9.2	10.8	10.6	10.3	10.3	11.6	11.2	10.8	10.8

Table A.1 (continued)

Use classification (see Table 3.2)	30° angle parking			45° angle parking				60° angle parking				90° angle parking			
	Low	Med	High	Low	Med	High	Acc	Low	Med	High	Acc	Low	Med	High	Acc
NOTE 1 Either (a) the distance from kerb line to opposite side of road for <200 vehicles/hour in any given hour in both directions, or (b) the distance from kerb line to dividing line for other traffic volumes. Both (a) and (b) include manoeuvre space.															
NOTE 2 Example calculation using 45° angle, low use parking: $SB = L3 - D3 - T = 9.4 - 5.5 - 3.5 = 0.4 \text{ m}$ where: SB = safety buffer T = traffic lane width (a constant of 3.5 m)															
NOTE 3 For further details on dimensions and additional shared area for accessible parking see Clause 4.5 .															

Table A.2 — Parking space dimensions for angle parking on roads with speed limit 60 km/h and less than 200 vehicles/hour one-way

Use classification (see Table 3.2)	30° angle parking			45° angle parking				60° angle parking				90° angle parking			
	Low	Med	High	Low	Med	High	Acc	Low	Med	High	Acc	Low	Med	High	Acc
Width:															
A — space width	2.1	2.3	2.5	2.4	2.5	2.6	2.4	2.4	2.5	2.6	2.4	2.4	2.5	2.6	2.4
B — space width parallel to kerb	4.2	4.6	5.0	3.4	3.5	3.7	3.4	2.8	2.9	3.0	2.8	2.4	2.5	2.6	2.4
Required width	4.2	4.6	5.0	3.4	3.5	3.7	3.4	2.8	2.9	3.0	2.8	2.4	2.5	2.6	2.4
Length:															
Lateral depth of spaces:															
D1 = park to wall or high kerb (>150 mm), no overhang	4.4	4.4	4.4	5.2	5.2	5.2	5.2	5.7	5.7	5.7	5.7	5.4	5.4	5.4	5.4
D2 = park to low kerb (not >150mm), 600mm overhang	4.1	4.1	4.1	4.8	4.8	4.8	4.8	5.1	5.1	5.1	5.1	4.8	4.8	4.8	4.8
D3 = park to wheel stops at right angles to parking direction	4.5	4.7	4.9	5.5	5.6	5.7	5.7	5.9	6.0	6.0	6.0	5.4	5.4	5.4	5.4
M = manoeuvre space	3.6	3.5	3.4	4.4	4.2	4.0	4.0	5.4	5.1	4.8	4.8	6.7	6.3	5.9	5.9
Required length (see Note 1)															
L1 = park to wall or high kerb (>150 mm), no overhang	8.0	7.9	7.8	9.6	9.4	9.2	9.2	11.1	10.8	10.5	10.5	12.1	11.7	11.3	11.3

Table A.2 (continued)

Use classification (see Table 3.2)	30° angle parking			45° angle parking				60° angle parking				90° angle parking			
	Low	Med	High	Low	Med	High	Acc	Low	Med	High	Acc	Low	Med	High	Acc
L2 = park to low kerb (not >150 mm), 600mm overhang	7.7	7.6	7.5	9.2	9.0	8.8	8.8	10.5	10.2	9.9	9.9	11.5	11.1	10.7	10.7
L3 = park to wheel stops at right angles to parking direction	8.1	8.2	8.3	9.9	9.8	9.7	9.7	11.3	11.1	10.8	10.8	12.1	11.7	11.3	11.3
NOTE 1 Distance from kerb line to dividing line (includes manoeuvre space).															
NOTE 2 Example calculation for 45° angle, low use parking: SB = L3 – D3 – T = 9.9 – 5.5 – 3.5 = 0.9 m															
where: SB = safety buffer T = traffic lane width (a constant of 3.5 m)															
NOTE 3 For further details on dimensions and additional shared area for accessible parking see Clause 4.5 .															

Table A.3 — Parking space dimensions for angle parking on roads with speed limit 60 km/h or less and from 200 to 800 vehicles/hour one-way

Use classification (see Table 3.2)	30° angle parking			45° angle parking				60° angle parking				90° angle parking			
	Low	Med	High	Low	Med	High	Acc	Low	Med	High	Acc	Low	Med	High	Acc
Width:															
A — space width	2.1	2.3	2.5	2.4	2.5	2.6	2.4	2.4	2.5	2.6	2.4	2.4	2.5	2.6	2.4
B — space width parallel to kerb	4.2	4.6	5.0	3.4	3.5	3.7	3.4	2.8	2.9	3.0	2.8	2.4	2.5	2.6	2.4
Required width	4.2	4.6	5.0	3.4	3.5	3.7	3.4	2.8	2.9	3.0	2.8	2.4	2.5	2.6	2.4
Length:															
Lateral depth of spaces:															
D1 = park to wall or high kerb (>150 mm), no overhang	4.4	4.4	4.4	5.2	5.2	5.2	5.2	5.7	5.7	5.7	5.7	5.4	5.4	5.4	5.4
D2 = park to low kerb (not >150 mm), 600 mm overhang	4.1	4.1	4.1	4.8	4.8	4.8	4.8	5.1	5.1	5.1	5.1	4.8	4.8	4.8	4.8
D3 = park to wheel stops at right angles to parking direction	4.5	4.7	4.9	5.5	5.6	5.7	5.7	5.9	6.0	6.0	6.0	5.4	5.4	5.4	5.4
M = manoeuvre space	6.6	6.5	6.4	7.4	7.2	7.0	7.0	8.4	8.1	7.8	7.8	9.7	9.3	8.9	8.9

Table A.3 (continued)

Use classification (see Table 3.2)	30° angle parking			45° angle parking				60° angle parking				90° angle parking			
	Low	Med	High	Low	Med	High	Acc	Low	Med	High	Acc	Low	Med	High	Acc
Required length (see Note 1)															
L1 = park to wall or high kerb (>150 mm), no overhang	11.0	10.9	10.8	12.6	12.4	12.2	12.2	14.1	13.8	13.5	13.5	15.1	14.7	14.3	14.3
L2 = park to low kerb (not >150 mm), 600 mm overhang	10.7	10.6	10.5	12.2	12.0	11.8	11.8	13.5	13.2	12.9	12.9	14.5	14.1	13.7	13.7
L3 = park to wheel stops at right angles to parking direction	11.1	11.2	11.3	12.9	12.8	12.7	12.7	14.3	14.1	13.8	13.8	15.1	14.7	14.3	14.3
NOTE 1 Distance from kerb line to dividing line (includes manoeuvre space).															
NOTE 2 Example calculation for 45° angle, low use parking: $SB = L3 - D3 - T = 12.9 - 5.5 - 3.5 = 3.9 \text{ m}$ where: SB = safety buffer T = traffic lane width (a constant of 3.5 m)															
NOTE 3 For further details on dimensions and additional shared area for accessible parking see Clause 4.5 .															

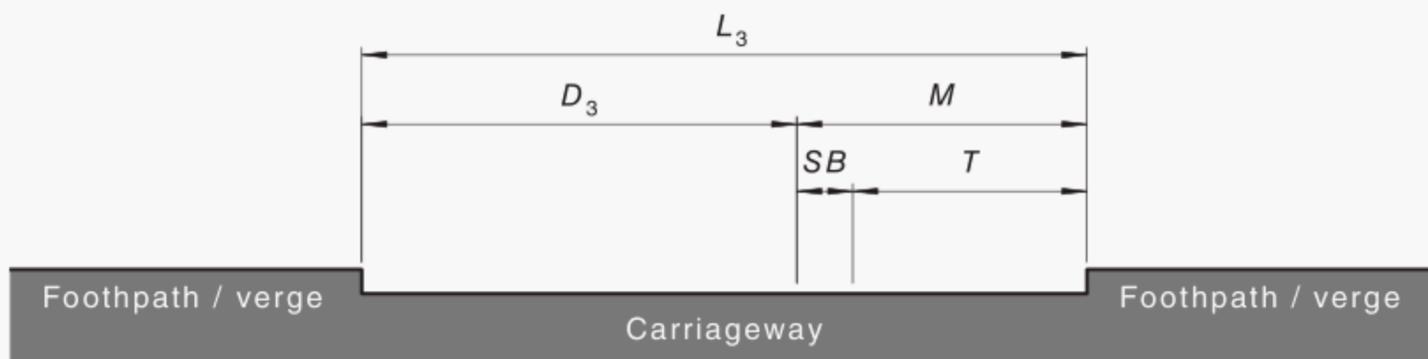


Figure A.1 — Cross-section of carriageway showing dimensions used in Table A.1 (less than 200 vehicles/hour in both directions)

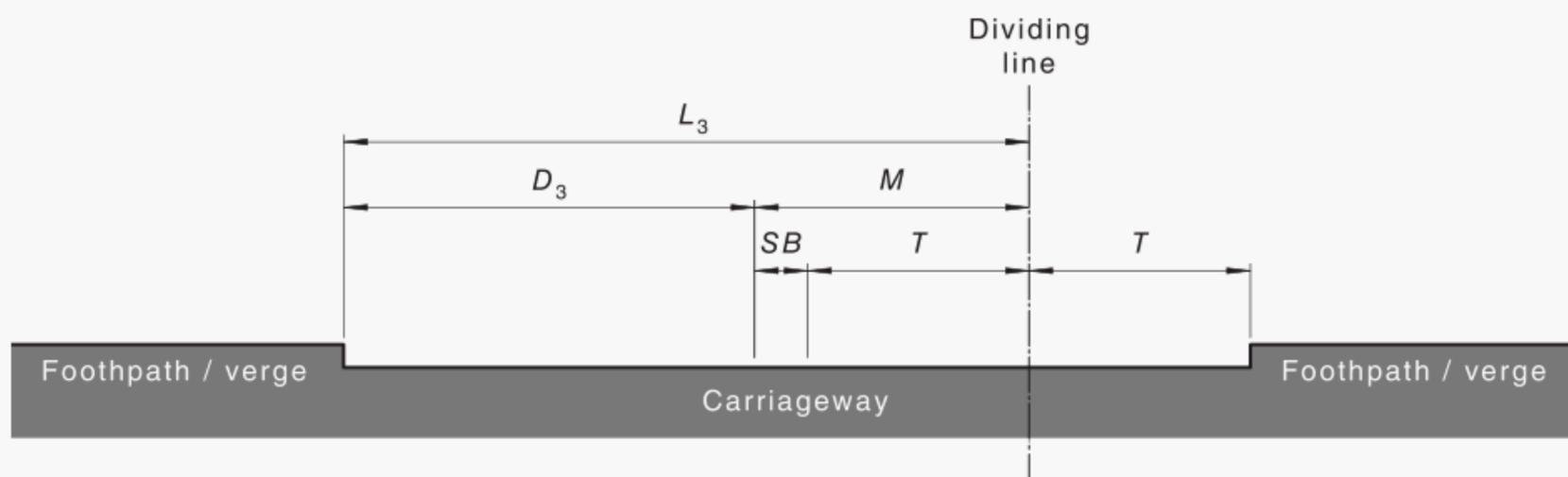


Figure A.2 — Cross-section of carriageway showing dimensions used in [Tables A.1](#) (other traffic volumes), A.2 and A.3

Bibliography

AS 1742.2, Manual of uniform traffic control devices, Part 2: Traffic control devices for general use

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IHIE . Guidelines for Motorcycling

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