

Australian Standard[®]

Manual of uniform traffic control devices

Part 15: Direction signs, information signs and route numbering



This Australian Standard® was prepared by Committee MS-012, Road Signs and Traffic Signals. It was approved on behalf of the Council of Standards Australia on 8 December 2006.
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-

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Manual of uniform traffic control devices

Part 15: Direction signs, information signs and route numbering

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PREFACE

This Standard was prepared by the Standards Australia Committee MS-012, Road Signs and Traffic Signals to supersede part of AS 1742.2—1994, *Manual of uniform traffic control devices*, Part 2: *Traffic control devices for general use* and part of AS 1742.8—1990, *Manual of uniform traffic control devices*, Part 8: *Freeways*. The remaining material in AS 1742.2—1994 and AS 1742.8—1990 not covered by this Standard is to be revised and republished as AS 1742.2.

This Standard is one of a series of fifteen Standards as follows:

AS

1742	Manual of uniform traffic control devices
1742.1	Part 1: General introduction and index of signs
1742.2	Part 2: Traffic control devices for general use
1742.3	Part 3: Traffic control devices for works on roads
1742.4	Part 4: Speed controls
1742.5	Part 5: Street name and community facility name signs
1742.6	Part 6: Tourist and service signs
1742.7	Part 7: Railway crossings
1742.8	Part 8: Freeways
1742.9	Part 9: Bicycle facilities
1742.10	Part 10: Pedestrian control and protection
1742.11	Part 11: Parking controls
1742.12	Part 12: Bus, transit, tram and truck lanes
1742.13	Part 13: Local area traffic management
1742.14	Part 14: Traffic signals
1742.15	Part 15: Direction signs, information signs and route numbering (this Standard)

The principal variation from the subject material previously included in the 1994 Edition of AS 1742.2 is the recommended phasing out of shield based route numbering systems (other than in certain specialist areas such as tourist and overdimensional load route numbering) and their replacement with the alphanumeric system of A, B, C and M routes. Other significant changes include the following:

- (a) More detailed guidance material on signboard design and layout.
- (b) A new categorization of Intersection Direction signs and Fingerboards.
- (c) Inclusion of direction signs for expressway type roads no longer to be covered by AS 1742.8.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix 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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STANDARDS AUSTRALIA

Australian Standard
Manual of uniform traffic control devices

Part 15: Direction signs, information signs and route numbering

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements and gives recommendations for the design and use of direction signs and related navigational aids including route numbering for all roads including expressway type roads. It also covers general information signs but not street name and community facility name signs or tourist or services signs.

NOTES:

- 1 Street name and community facility name signs are covered in AS 1742.5.
- 2 Tourist and services signs are covered in AS 1742.6.
- 3 Direction signs for bicycle facilities are covered in AS 1742.9.

1.2 REFERENCED DOCUMENTS

AS

- | | |
|---------|--|
| 1348 | Roads and traffic engineering—Glossary of terms |
| 1742 | Manual of uniform traffic control devices |
| 1742.2 | Part 2: Traffic control devices for general use |
| 1742.4 | Part 4: Speed controls |
| 1742.5 | Part 5: Street name and community facility name signs |
| 1742.6 | Part 6: Tourist and services signs |
| 1742.9 | Part 9: Bicycle facilities |
| 1742.14 | Part 14: Traffic signals |
| 1743 | Road signs—Specifications |
| 1744 | Forms of letters and numerals for road signs |
| 2342 | Development, testing and implementation of information and safety symbols and symbolic signs |

AS/NZS

- | | |
|--------|---|
| 1906 | Retroreflective materials and devices for road traffic control purposes |
| 1906.1 | Part 1: Retroreflective materials |

Austroads

Rural Road Design: *A Guide to the Design of Rural Roads: Austroads* 2003

1.3 DEFINITIONS

For the purposes of this Standard the definitions in AS 1348 and the following apply.

1.3.1 Expressway type roads

A divided highway for through traffic with full or partial control of access and generally with grade separation at intersections. The term includes expressways, freeways, tollways and motorways (as defined in AS 1348).

1.3.2 Focal point map

A map of the principal road system in an area or state showing the towns or cities (either within or outside the area covered by the map) to be used either as through route destinations from any point in that system or the destination along any intersecting road which is also part of that system.

1.3.3 Shall

Indicates that a statement is mandatory.

1.3.4 Should

Indicates a recommendation.

1.3.5 85th percentile speed (V_{85} km/h)

The speed at or below which 85% of all vehicles are observed to travel under free-flowing conditions past a nominated point.

NOTE: A guide to the determination of 85th percentile speed is given in AS 1742.4.

1.4 RESPONSIBILITY AND AUTHORITY FOR INSTALLATION

Responsibility for installing traffic control devices is vested in various state and local government authorities. The installation of new devices or interference with existing ones without authority is an offence. Attention is drawn to the fact that it is necessary to obtain approval of the appropriate authority before installing any traffic control device.

Display of unofficial and non-essential devices by private or commercial organizations should not be permitted.

1.5 PRINCIPLES OF GOOD SIGN PRACTICE

Basic principles applying to direction and information signs are as follows:

- (a) They shall be designed to command both attention and respect by virtue of their composition, their presentation and the relevance of their message to the driving task.
- (b) They shall not include any advertising or other commercial content except as permitted in AS 1742.6.
- (c) Navigational information shall be displayed consistently and with continuity along a route and through changes in direction.
- (d) The location and visibility of signs giving basic navigational information shall not be compromised by signs whose message or location is discretionary.
- (e) They shall be positioned to allow both easy visibility and adequate time for the required response.
- (f) Direction signs shall not detract from or obscure essential safety signs and devices.
- (g) Their message should be simple and clear with content limited to that which can be read, understood and acted upon safely by drivers under the prevailing traffic conditions.
- (h) They should be provided in response to a demonstrated need.
- (i) Destination names should be selected from focal point maps where they exist, and the names used consistently until the named destination is reached.
- (j) Directional and warning messages should not be shown on the same sign.

1.6 SIGN DESIGN GUIDELINES

1.6.1 Signboard layout

Requirements for an effective and visually satisfactory signboard layout are as follows:

- (a) Legend elements shall be of adequate size to meet legibility and prominence requirements.
- (b) Elements of a sign shall be arranged so that the intended association of each with various other elements is clear to the observer of the sign.
- (c) A signboard shall be of appropriate shape and of sufficient size so that optimum spacings can be provided between legend elements and to sign edges and borders, both internal and external.

NOTES:

- 1 A means of determining letter size for signs is given at Appendix A.
- 2 Guidelines for the sizing and spacing of legend elements on guide and information signs are given at Appendix B.

1.6.2 Presentation of information

Information on a guide sign or assembly of guide signs facing any one direction should be presented in the following order:

- (a) Straight ahead directions should be placed at the top of lists, stacks or diagrammatic symbols.
- (b) If the straight ahead direction is not the through direction, prominence by means of increased letter size should be given to the through direction.
- (c) List of destinations on the same route should be presented in the order they are reached, nearest at the top.
- (d) Angled directions (less than a right angle) should be shown above right angle or acute angle directions.
- (e) Items (a) to (d) apply both to side mounted and overhead signs with the exception of overhead lane designation signs where individual lane directions should be placed above each lane. Item (c) applies where there is more than one name over a lane.
- (f) Driving instructions should be placed below names. Item (c) applies to the listing of destinations on driving instruction signs.

1.6.3 Sign format

Basic formats for direction signs are as follows:

- (a) *List (stack) type—wide format* Information is presented in a vertical list, separated as necessary into sign panels by horizontal internal dividing lines, with arrows, route numbers, distance numerals and the like beside the legend, see Figure 1.1. This is generally regarded as the most efficient form for simple intersections and roundabouts in respect of both readability and economy of sign size, provided there is adequate lateral roadside space to fit the sign.

NOTE: A simple roundabout in this context would be one having not more than four legs total and a central island small enough and low enough for drivers to be able to see all legs on approach to the roundabout.

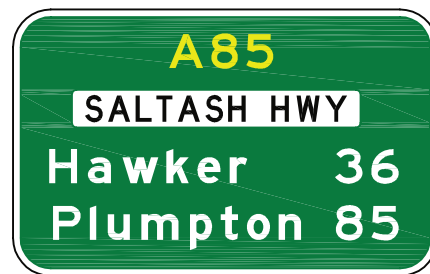
- (b) *List (stack) type—narrow format* Information is presented as above except that arrows, route numbers and like information is placed above or below direction or route names so that the signboard can be narrowed down to fit a location of restricted lateral space, see Figure 1.2. Use of the narrow format is to a minor extent, at the expense of readability.

- (c) *Diagrammatic type* Information is presented in the form of a symbolic representation of the intersection layout with route and direction names shown against the legs of the intersection symbol, see Figure 1.3. This format is generally more appropriate to complex intersections, e.g. multiple legs, offset legs, large or complex roundabouts and to expressway exits or interchanges.
- (d) *Driving instruction type* Direction names, route names and numbers are accompanied by instructional messages indicating how the destination or route is to be accessed, see Figure 1.4. These messages take forms such as LEFT (RIGHT) LANE, 2 LEFT LANES, NEXT (RIGHT) LEFT, TURN RIGHT 300 m, EXIT, NEXT EXIT, EXIT 2 km. Signs associating individual lane arrows with direction names, route names and numbers are also in this type.

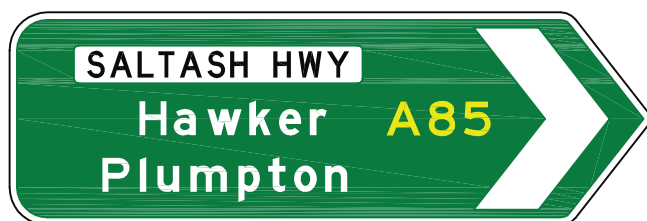
Advance exit and exit direction signs on expressway type facilities, other than diagrammatic advance signs, see Item (c), are in this category.



(a) Advance direction signs



(b) Reassurance direction signs



Category 1 (Major)



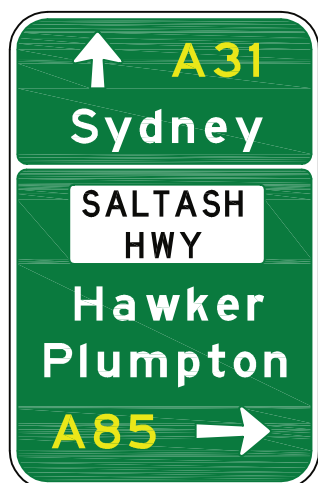
Category 2 (Minor)



Category 3 (Fingerboard)

(c) Intersection direction signs

FIGURE 1.1 DIRECTION SIGN FORMATS LIST (STACK) TYPE—WIDE FORMAT



(a) Advance direction sign

(b) Intersection direction sign —
Category 1 only

FIGURE 1.2 DIRECTION SIGN FORMATS LIST (STACK) TYPE—NARROW FORMAT

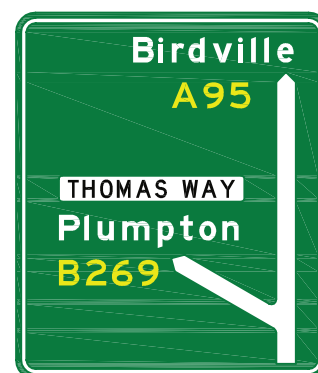
(a) Offset side roads
(Advance signs only)(b) Large or complex
roundabouts
(Advance signs only)(c) Advance exit—
expressway type roads

FIGURE 1.3 DIRECTION SIGN FORMATS—DIAGRAMMATIC TYPE



(a) Advanced exit and exit direction signs—expressway type roads



Side or overhead mounted

Overhead mounted

Side mounted

(b) Advance signs—all roads

FIGURE 1.4 DIRECTION SIGN FORMATS—DRIVING INSTRUCTION TYPE

1.6.4 Distances on signs

Where distances to destinations or other focal points are given on guide signs they shall be shown as follows:

- Distances up to 500 m—to nearest multiple of 50 m with the letter 'm' shown after the numerals.
- Distances between 500 m and 1 km—to nearest multiple of 100 m with the letter 'm' shown after the numerals.
- Distances of 1 km or more—to the nearest km. The numerals alone shall be shown unless there may be confusion with other numerals on the sign in which case 'km' may be shown.

NOTE: Item (c) does not apply to distance indications on expressway advance exit or similar type signs, e.g. see Clauses 3.4.1 and 3.6.2.

1.6.5 Route and street names

Recommendations for the display of route and street names on direction signs are as follows:

- A sign or sign panel may contain only a road or street name if no useful destination name can be applied to the direction indicated.
- A route or street name should accompany a destination name on direction signs in the following cases:
 - At the beginning of a named route.
 - Where a named route turns at an intersection.

- (iii) All direction signs referring to a street or named route which crosses or intersects with the route on which the observer is travelling.
- (iv) All reassurance direction signs either within urban areas or on city/town outskirts facing traffic leaving the urban area.

NOTE: In rural areas the use of a route name would generally be limited to named highways.

- (c) In locations where a named highway also has a local name, only the name applying to the greater length, e.g. the highway name, should be shown on any sign in the G1 to G4 Series. Street name signs, G5 Series (see AS 1742.5) show the local name.

1.6.6 Directions to distant routes

Directions to a distant route may be substituted for a destination or shown in conjunction with a destination on a direction sign. Legends shall be in the following format:

- (a) TO A85 (NAME) HWY
- (b) (Town) VIA A85 (NAME) HWY

Where these legends are used, they shall comprise white upper case legend (yellow for route number) and green background with legend height equal to that for a road name specified for the particular sign and type of sign.

Examples of the use of these legends are shown in Figure 2.1(c).

1.6.7 Use of apostrophes

Names of towns, routes or features which imply the possessive case, e.g. Smiths Creek, shall not show an apostrophe.

1.6.8 Letter types and sizes, sign colour

Letters and numerals shall conform to AS 1744. Requirements for the letter types and sizes to be used on direction signs are as follows:

- (a) Lettering for destination names on signs other than Fingerboards shall be white lower case with Modified Series E initial capitals on a standard green background. Lettering for destinations on Finger boards shall be white upper case on standard green.
- (b) Lettering for route and street/road names on all signs including Fingerboards shall be black upper case on a white background which in the case of all signs other than Fingerboards shall be in the form of a white road name panel on a standard green background.
- (c) Lettering for driving instructions (e.g. LEFT LANE, 2 LEFT LANES, EXIT, EXIT 2 km) shall be white upper case on a standard green background, except for distance letters 'm' and 'km' which shall be lower case.
- (d) Letters and numerals for route numbers (except where shown on a shield) shall be yellow upper case on a standard green background.
- (e) Cautionary legends such as ONLY, EXIT ONLY, TOLL associated with directions to indicate a trap situation shall be black upper case letters on a yellow panel.
NOTE: This requirement should not be extended to other warning messages, see Clause 1.5(j).
- (f) Supplementary distance plates for direction signs shall be white legend on a standard green background and the same legend height as the principal legend on the sign.
- (g) Supplementary Exit Number plates shall be green legend on white background.

- (h) Minimum letter sizes and types for direction signs shall be as follows:
- (i) Signs on roads other than expressway type roads—Table 1.1.
 - (ii) Signs on expressway type roads as follows:
 - (A) At and in advance of intersections at grade—by reference to the ‘wide road’ category in Table 1.1.
 - (B) At and in advance of interchanges—Table 1.2.

TABLE 1.1
RECOMMENDED MINIMUM LETTER SIZE AND TYPE FOR DIRECTION
SIGNS—OTHER THAN EXPRESSWAY TYPE ROADS
(INCLUDES INTERSECTIONS AT GRADE ON EXPRESSWAY TYPE ROADS)

Sign type	Sign number(s)	Legend type	Sign location millimetres	
			Narrow road, side mount (see Note 2)	Wide road, side mount plus all overhead signs (see Note 3)
Advance direction (see Note 4)	G1-1 to G1-7, G9-7, G9-8, G9-42, G9-43	Destination Road name Driving instruction Route number	160 E.Mod/120 l.c. 120 DM (see Note 5) 120 EM (see Note 6) 160 EN	240 E. Mod/180 l.c. 180 DM (see Note 5) 180 EM (see Note 6) 240 EN
Intersection direction, Type 1 (major type)	G2-1 to G2-5	Destination Road name Route number Distance numerals	160 E.Mod/120 l.c. 120 DM (see Note 5) 160 EN 160 EN	240 E.Mod/180 l.c. 180 DM (see Note 5) 240 EN 240 EN
Intersection direction, Type 2 (minor type)	G3-3	Destination Route number Distance numerals	140 E.Mod/105 l.c. 140 EN 140 EN	N/A N/A N/A
Road name panel (for use with Sign No. G3-3)	G3-4	Road name	120 DN	N/A
Intersection direction, Type 3 (Fingerboards)	G3-5	Road name	130 DN	N/A
	G3-6	Destination Distance numerals	100 DN 100 DN	N/A N/A
Route number panel (for use with Sign No. G3-6)	G3-7	Route number	100 EN	N/A
Reassurance direction	G4-1	Destination Road name Route number Distance numerals	140 E.Mod/105 l.c. 120 DM 140 EN 140 E.Mod	180 E.Mod/135 l.c. 160 DM 180 EN 180 E.Mod

NOTES:

- 1 Letter type and Series designations are as specified in AS 1743.
- 2 The designation ‘narrow’ applies to two-lane rural roads and urban roads two lanes or less, one way.
- 3 The designation ‘wide’ applies to multi-lane rural roads and urban roads wider than two lanes one way. This category also includes intersections at grade on expressway type roads.
- 4 Includes diagrammatic signs and advance lane indication signs.
- 5 For signs in this category having only a road name and no destination name, the road name is in the same size legend as the route number.
- 6 Driving instruction legends should be the same letter height as the lower case height used for destinations.

TABLE 1.2
RECOMMENDED MINIMUM LETTER SIZE AND TYPE FOR DIRECTION
SIGNS—EXPRESSWAY TYPE ROADS

millimetres					
Sign type	Sign number(s)	Legend type	Standard size	Optional oversize (see Note 1)	Optional reduced size (see Note 2)
Expressway advance exit, exit direction, including diagrammatic types	GE1-5 to GE1-14 (except GE1-8 and GE1-9), (see Note 3) GE2-1 and GE2-2	Destination	400 E.Mod/300 l.c	640 E.Mod/480 l.c	320 E.Mod/240 l.c
		Road name	300 EM	480 EM	240 EM
		Driving instruction	350 EM	560 EM	280 EM
		Route number	400 E	640 E	320 E
Reassurance direction	GE4-1 GE1-9	Destination	240 E.Mod/180 l.c	—	180 E.Mod/135 l.c
		Road name	180 EM	—	140 EM
		Route number	240 E	—	180 E
Supplementary advance exit	GE1-8	Destination	320 E.Mod/240 l.c	400 E.Mod/300 l.c	240 E.Mod/180 l.c
		Road name	240 EM	300 EM	180 EM
		Driving instruction	280 EM	350 EM	210 EM
		Route number	320 E	400 E	240 E
Advance and intersection direction on exit ramps	G1 Series, G2 Series	Destination	180 E.Mod/135 l.c	240 E.Mod/180 l.c	—
		Road name	160 EM	180 EM	—
		Route number	180 E	240 E	—

NOTES:

- 1 Typical uses of optional oversize are where additional reading time may be needed for a complex or extensive message, or where a longer viewing distance is needed to allow an early decision or manoeuvre to be made.
- 2 Small size legend is appropriate where speeds are lower than the usual expressway speed and to exit signs at low volume exits on rural expressways.
- 3 Signs in the GE1-5 to GE1-14 categories with road names only and no destination names, have the names in capitals the same height as the route number.
 - (i) Letter size, shall be adjusted if necessary to take account of approach speed, length of message and the lateral or vertical placement of the sign. Recommendations for the modification of the letter size to take account of these factors is given in Appendix A. Other factors which may also affect letter or sign size are as follows:
 - (i) (Distraction due to roadside activity or background.
 - (ii) Signs composed of short legends. The sign may have to be enlarged to ensure that it is conspicuous.
 - (iii) Signs containing short and long legends. It may be necessary either to increase the letter size of the short legend or to select a letter size which ensures each has approximately equal visual impact.
 - (iv) The need to emphasize a more important direction by making it larger than other names on the sign.

1.6.9 Use of arrows

Arrows on direction signs shall conform to Table 1.3 regarding arrow shaft shape and orientation. The length of the shaft may vary from these shown in the Table but the arrow head size shall be related to the size of the principal legend in the sign panel as specified in AS 1743.

NOTES:

- 1 A width across barbs of 880 mm is appropriate where the principal legend is 640 mm E Mod/480 mm LC or 480 mm series A to F with other sizes adjusted in proportion.
- 2 Downward pointing arrows are not used on direction signs. They are generally confined to use on signs in the regulatory and traffic instruction series.

1.6.10 Illumination and reflectorization

Signs that are intended to convey messages during the hours of darkness shall be either illuminated or reflectorized, as given in Appendix C, so that their daytime colours and shapes are displayed at night.

1.6.11 Non-standard signs

Authorities responsible for the erection of signs should not develop signs for their own particular use. However, there will be instances where no suitable Standard sign exists. In such cases, after discussion with the appropriate State road or traffic authority, any sign developed shall comply with the design principles specified in this Standard including shape and colour coding, for the particular sign classification as far as is practicable.

More detailed requirements and recommendations for non-standard information signs are given in Clause 5.3.

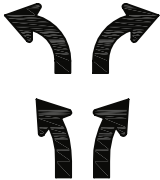
1.7 INSTALLATION AND LOCATION

General requirements for the installation and location of signs are given in Appendix D.

1.8 MATERIALS AND MANUFACTURING SPECIFICATIONS

An abridged manufacturing specification together with fully dimensioned examples of guide signs are given in AS 1743.

TABLE 1.3
USE OF ARROW TYPES ON DIRECTION SIGNS

Arrow Shape	Advance Direction Signs Stack type: G1-1 G1-2 G1-4 G1-6	Driving Instruction Direction Signs (Single Direction type G9-7, see Note 1)		Exit Direction Signs on expressway type road approach (overhead only unless indicated otherwise) generally: GE2-1-1, GE2-1-2, GE2-1-3 except as noted below.
		Side Mounted	Overhead, including arterial road at ramp terminals	
THROUGH LANE(S): vertical arrow or curved arrow with vertical shaft				
	Through lane(s) proceed straight or almost straight ahead (See Note 2)	Arrows not normally used, but may be used as specified for Advance Direction Signs	Either a separate arrow over each through lane or one arrow to cover all through lanes	Through lane(s) proceed straight or almost straight ahead
	Through lane(s) curve at or near the intersection and a curve within the arrow will assist driver navigation		Either a separate arrow over each through lane or one arrow to cover all through lanes	Through lane(s) curve and a curve within the arrow will assist driver navigation. Also used for an exclusive exit lane at a two-lane exit on GE1-14 type sign, see Clause 3.4.5
TURNS OFF THE THROUGH ROUTE: Straight arrow-horizontal, angled or with bend				
	The usual indication of a left turn, including at a minor stagger or angle	Normal use is as G2-5 sign. Not normally required as G9-7, but may be used as specified for Advance Direction Signs	Not used. Use either the G9-8 or the GE1- 14 over the shared through and turn lanes.	Not used
	The usual indication of a right turn, including at a minor stagger or angle			Not used
	A left turn, where the angle will assist driver navigation (angle to suit)			The usual indication of a left exit (side mounted also)
	A right turn, where the angle will assist driver navigation (angle to suit)			The usual indication of a right exit (side mounted also)
	Left turn at staggered T junction with major offset (left leg after right leg)	Not used	Exclusive left turn lane	Not used
	1 Right turn at staggered T Junction with major offset (right leg after left leg) 2 Right turn at second entry ramp terminal from interchange cross road	Not used	Exclusive right turn lane	Not used
OTHER				
	NOT USED	NOT USED	Shared turn and through lane	Shared exit and through lane on GE1- 14 sign.

NOTES To Table 1.3:

- 1 For multiple direction/lane type signs, see Clause 2.3.2 and the examples in Figure 2.6.
- 2 Where the through lane(s) curve and the side road goes straight ahead, use a straight arrow angled at 10–15 degrees off vertical for the side road.
- 3 For an exclusive lane at a two-lane exit, see Clause 3.4.5.

SECTION 2 DIRECTION SIGNS AT AND NEAR INTERSECTIONS

2.1 GENERAL

This Section specifies and gives recommendations for direction signs at and near intersections on roads other than expressway type roads. It is also applicable to intersections at grade on expressways. Signs in the following G Series classifications shall be used:

- (a) In advance of the intersection—
 - (i) G1-1 to G1-7 Advance Direction signs;
 - (ii) G9-7, G9-8, G9-42, G9-43 Driving instruction signs.
- (b) At the intersection—
 - (i) G2-1 to G2-5 Major Intersection Direction signs (Type 1);
 - (ii) G3-3 to G3-5 Minor Intersection Direction signs (Type 2);
 - (iii) G3-6 Fingerboards (Type 3).

NOTE: Type 3 Fingerboards do not include signs with route names only. Equivalent signs with route names are those in the G5 Series specified in AS 1742.5 as street name signs.

- (c) Beyond the intersection (and elsewhere)—G4-1 Reassurance Direction signs.

These signs shall incorporate route numbers wherever the sign directs traffic along one or more numbered routes.

2.2 ADVANCE DIRECTION SIGNS

2.2.1 Application

Advance Direction signs shall be used in advance of an intersection where required to indicate destinations along each route leading away from the intersection, including the next principal destination along the route on which the driver is travelling. Where applicable, the signs shall include route numbers and may include the names of the intersecting roads.

Advance Direction signs should usually be erected in the following locations:

- (a) In advance of intersections where two arterial routes meet or cross, or on an arterial route and a sub-arterial route meet or cross.
- (b) In advance of intersections where the arterial route turns.

Intersection direction signs, see Clause 2.4, shall be used at all intersections where advance direction signs have been used.

2.2.2 Format and use

Advance Direction signs may be either the stack or diagrammatic type, see Clause 1.6.3. Each type should normally be located on the left side of the road or in the median of a divided road if it provides for better prominence or visibility of the sign. In some circumstances, e.g. in urban areas where a suitable roadside location cannot be found, or where the prominence or visibility of a side-mounted sign at an important intersection would be lacking or impaired, an overhead sign should be considered.

Direction signs should not be placed in the median of expressway type roads.

The formats are described as follows:

- (a) *Stack signs, (G1-1, G1-2, G1-4, G1-6)* The stack sign, wide or narrow format, is generally satisfactory for simple cross or T-intersections or simple roundabouts (see Note to Clause 1.6.3(a)). Such signs list destinations together with appropriate directional arrows and, if required, road names and route numbers. Examples are shown in Figure 2.1.

The destinations and other information on the sign should be presented as recommended in Clause 1.6.2 and as indicated below.

The direction in which an arrow points should be indicative of the movement ahead and not necessarily representative of the geometric layout. Arrows pointing to destinations, therefore, should either be vertically upward, horizontal, or upward at 45 degrees to the horizontal. Horizontal and angled arrows should always be placed nearest the side of the sign panel to which they point. Downward arrows shall not be used on stack signs. Arrow types are shown in Table 1.3.

Each successive sign panel in a stack should have the arrow at the opposite end to the panel above it.

If there are two destinations or destination groups on a sign, each with a horizontal arrow, the more important destination or group should be placed above the other.

If the straight-ahead or through direction turns just beyond the intersection, the straight-ahead arrow may have a curved shaft starting from the vertical to more clearly indicate the road layout see Figure 2.1(b). Such arrows are shown in the second row of Table 1.3.

If an intersection comprises a staggered pair of side roads with a substantial offset from one another, the leg furthest from the sign may be indicated by a curved arrow as illustrated in Figure 2.1(d).

If a route number applies to only one destination it should be located adjacent to the arrow. Where one number or route name applies to two destinations in different directions, sign G1-4, see Figure 2.1(e) should be used and the number or route name, or the two, one above the other if both are used, should be located centrally at the top of the sign.

A straight-ahead sign panel may be added above a G1-4 type sign, if appropriate.

The wide format should be used except where lateral space is restricted, e.g. near some urban intersections. In the latter case a narrow format sign G1-6, see Figure 2.1(f), having the arrow (and Route marker) above a destination (straight-ahead indications), or below a destination (horizontal and angled indications), may be used in lieu. This format should be used only when the standard form will not fit the available space. If one route number or route name, or combination of the two applies to two destinations in different directions, i.e. as for the G1-4 sign described above, the narrow format sign requires a partial dividing line between the destinations.



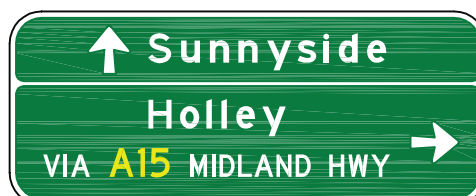
(a) Sign No G1-1 (two-panel)



(b) Sign No G1-2 (three-panel)



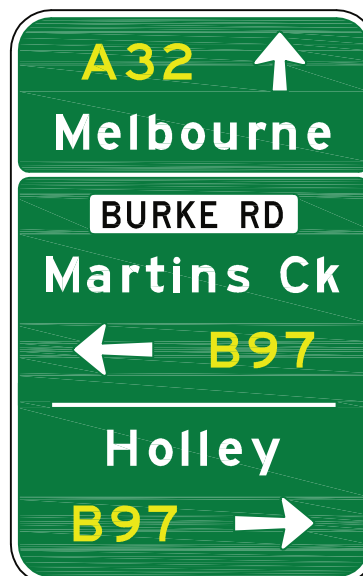
(c) Sign No G1-1 (showing a direction to a distant route supplementing or used in place of a focal point)



(d) Sign No G1-2 (showing offset side roads)



(e) Sign No G1-4 (single panel, two-direction)



(f) Sign No G1-6 (narrow format)

FIGURE 2.1 EXAMPLES OF STACK TYPE ADVANCE DIRECTION SIGNS

- (b) *Diagrammatic direction signs (G1-3, G1-5 and G1-7)* This type of sign presents a simplified diagram of the intersection layout. Examples are shown in Figure 2.2.

The legend size on diagrammatic signs should normally be no smaller than that required for stack signs in the same situation. This will usually result in a signboard considerably larger than an equivalent stack sign and for this reason, the use of diagrammatic direction signs should be confined to complex or unusual intersection layouts, i.e. layouts other than simple cross or T-intersections or simple roundabouts (see Note to Clause 1.6.3(a)) which can be adequately dealt with using stack type signs.

Typical uses are as follows:

- (i) Two separate closely spaced intersections, e.g. offset side roads.
- (ii) At large or complex roundabouts.

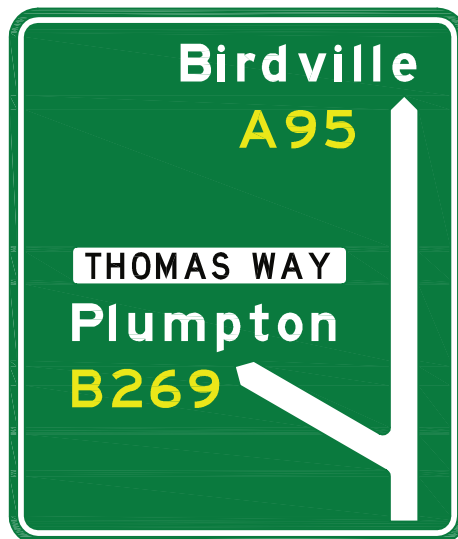
- (iii) Intersections with more than four legs.
- (iv) Ramps or slip roads at non-expressway grade separations including those involving counter-intuitive or unusual turning movements.
- (v) Signs for by-passed towns.



(a) Sign No G1-3 (offset side roads)



(b) Sign No G1-5 (roundabout)



(c) Sign No G1-7 (ramp or slip road)

FIGURE 2.2 EXAMPLES OF DIAGRAMMATIC DIRECTION SIGNS

2.2.3 Legend

Advance Direction signs including diagrammatic types should be limited to five names in total, inclusive of route or destination names.

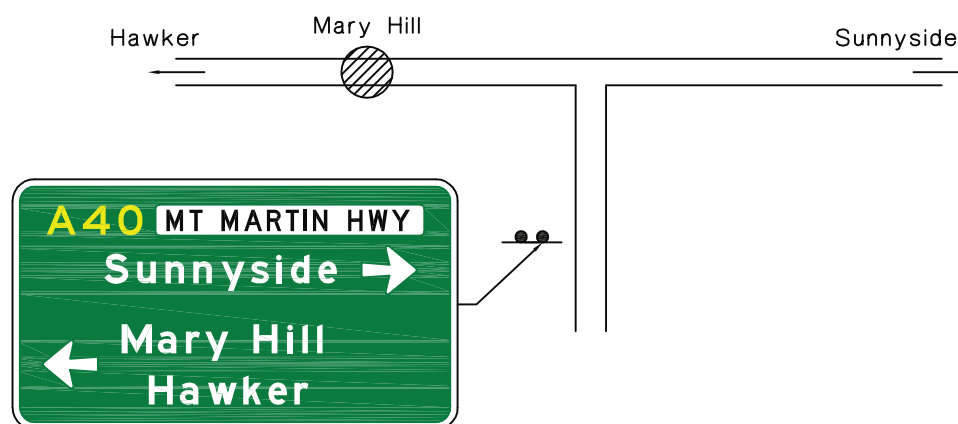
Not more than two destination names and preferably only one should be used for any one direction. Where there are to be two names the first (top) name shall be that of the closer town. A route name should be placed immediately above any destination names to which it refers.

The destination to be shown should be the next town of importance on the route to be followed, and preferably one which provides through travellers unfamiliar with the district with a range of traveller services and which is prominently shown on road maps. It may sometimes be necessary to show on the signs a town which, although small, is important due to its location, e.g. at the junction of two highways or close to but on one side of the junction (see Figure 2.3).

NOTE: Some road authorities have focal point maps showing principal destination names to be used along routes in their State or region to maintain consistency in the use of such names.

Directions to a distant route may be used to supplement or may be shown in place of a focal point, see Clause 1.6.6. Examples are shown in Figure 2.1(c).

Recommendations for the inclusion of the names of streets or routes crossing or branching from the main route in the relevant sign panel, are given in Clause 1.6.5.



NOTE: Mary Hill is not a principal town on the Mt Martin Highway but it is an important reference point for traffic on the side road.

FIGURE 2.3 SIDE ROAD DESTINATIONS—SMALL TOWN ON THE MAIN ROUTE NEAR THE JUNCTION

The name of the through route should not normally be shown unless it turns at an intersection and the continuity of the route may not be obvious (but the route number, if any, should always be shown). A sign panel may in some circumstances contain only a route name, for example, the name of a road or street of less importance than other intersection legs, and to which no useful destination name can be applied.

Towns on other roads branching from the through route beyond an intersection should not usually be named until the intersection of that branch road is reached. An exception to this rule is where the through route divides at a subsequent intersection into two routes of approximately equal importance (see Figure 2.4).

Distances to destinations shall not be given on Advance Direction signs.

Recommended minimum letter types and sizes are given in Table 1.1.

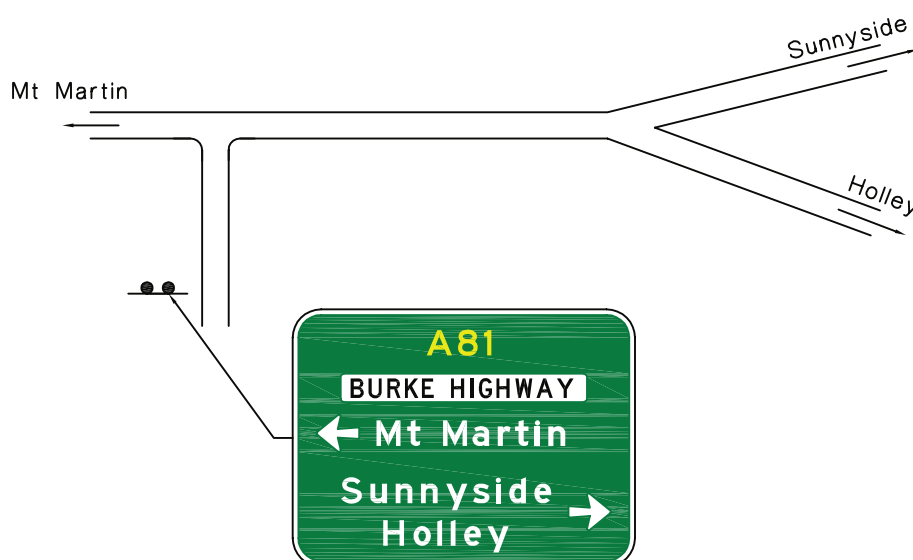


FIGURE 2.4 SIDE ROAD DESTINATIONS—MAIN ROUTE DIVIDES BEFORE A TOWN IS REACHED

2.2.4 Location and mounting

Advance Direction signs should be located and mounted in accordance with the general principles set out in Appendix D.

The distance at which an Advance Direction sign should be located in advance of an intersection varies according to the expected speed of approaching vehicles so as to provide drivers with prior information in time to enable them to make decisions and, if necessary, to reposition their vehicle before reaching the intersection.

In rural areas, Advance Direction signs should normally be located a minimum distance from the intersection as indicated in Table 2.1. If the intersection is channelized and has separate turn lanes, the distance should be measured from the start of the turn lane(s).

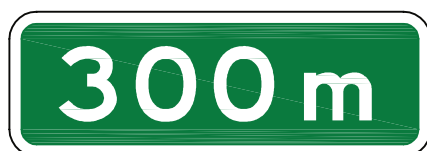
TABLE 2.1
DISTANCE OF ADVANCE DIRECTION
SIGNS (G1 Series) FROM INTERSECTION

V_{85} km/h	Distance from intersection, m
<75	80–120
75–90	120–180
>90	180–250

However, in some locations where the approach speed of traffic to an intersection is high, and a significant proportion of approaching traffic makes a turn at the intersection, additional advance information may be needed on a sign located up to 1 km from the intersection. A sign of the type G9-8 (see Clause 2.3.3) with an alternative legend such as (Destination) TURN RIGHT 400 m should be considered in such cases.

In urban areas, although the principles outlined above also apply, the desired location may be unsuitable because of roadside development, shop awnings, advertising signs and intersecting streets. Where roadside development does not permit the preferred location, it may be necessary to cantilever the sign over the road at a point much closer to the intersection. The size of lettering should be increased in such cases (see Appendix A). Alternatively, a diagrammatic sign may be required.

2.2.5 Supplementary distance plate (G9-66)



G9-66

The supplementary distance plate, G9-66 showing the distance in metres to the intersection to which the sign refers, may be mounted below an advance sign where there are intervening side streets or where the distance from the sign to the intersection is otherwise greater than a driver might expect.

The distance on the G9-66 sign shall be shown in accordance with Clause 1.6.4. The legend height shall be the same as the principal destination on the parent sign.

2.3 DRIVING INSTRUCTION DIRECTION SIGNS

2.3.1 Single direction type (G9-7 and G9-8)



G9-7



G9-8

The driving instructions direction signs G9-7 and G9-8, should generally be used on high volume, multi-lane approaches to an intersection where drivers need additional directions or reminders beside, or over one or more lanes, as to the correct lane they must use for their intended movement at the intersection. They are typically required at the beginning of high volume exclusive turning lanes of greater length than drivers might expect or where extra warning of the need to weave may be required.

Conventional Advance Direction signs (stack or diagrammatic) should also be provided in conjunction with the signs, except where an assembly on a gantry over the carriageway provides all necessary directional information including the through direction. Destinations used on Driving Instruction Direction sign(s) shall always be the same as those used on the relevant part of the Advance Direction sign.

The legend shall be selected and designed in accordance with Clauses 1.6.8 and 2.2.3, except that a lane arrow used on an overhead sign shall be mounted directly over the lane to which it refers. The lane arrow shall point vertically upwards if the through direction is straight ahead, or, starting vertically upwards, curve when the through direction curves or turns at the intersection. Where directional or driving instructions are given in words, they shall be Series D or E capitals in accordance with Table 1.1.

The signs G9-7 and G9-8 are used as follows:

- (a) The sign G9-7, or an assembly as in Figure 2.5, shall be placed over the relevant lane(s), with arrow(s) located as nearly as practicable over the centre of the lane(s). As an alternative a single overhead sign containing several lane arrows associated with the same set of directions, as illustrated by sign GE1-14 in Clause 3.4.5, may be considered. These signs shall only be located where the lanes referred to are fully developed. To be effective they should be readable from a point where drivers are able to weave into the correct lane before reaching the intersection. See Table 1.3 for use of arrow types.

Signs with multiple overhead lane designation arrows may not be effective where the road curves just in advance of the sign, as drivers may then be unable to relate the sign arrows to the individual lanes marked on the pavement.

- (b) The sign G9-8, left or right version, should be used either as a side-mounted sign, or as a single overhead sign which does not project completely over the lane concerned or is placed before the start of the turning lane. The legend may be altered to 2 LEFT (RIGHT) LANES if there are two lanes turning. For more than two lanes turning, see Clause 2.3.2. Signs referring to two or more lanes shall only be located where the lanes referred to are fully developed at the sign position. To be effective they should be readable from a point where drivers are able to weave into the correct lane before reaching the intersection.

Signs with the alternative message in Clause 2.3.3 may be required at greater distances in advance of the intersection.

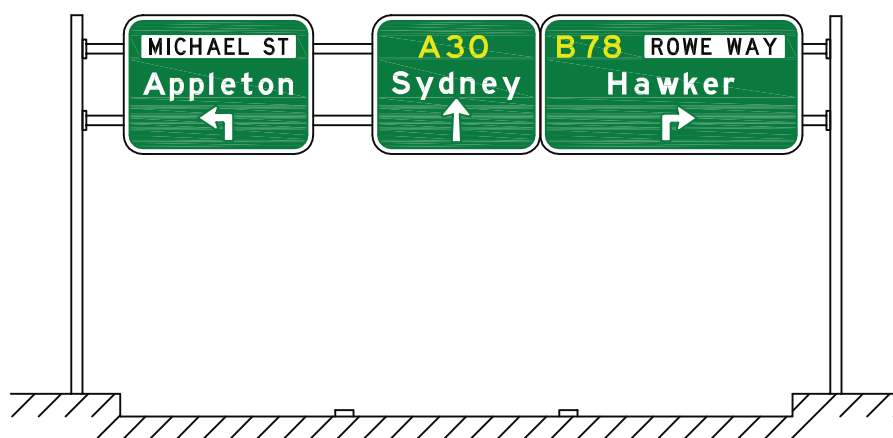


FIGURE 2.5 TYPICAL LANE DESIGNATION ASSEMBLY USING G9-7 SIGNS

2.3.2 Multiple direction/lane type

The multiple direction type Driving Instruction (Diagrammatic) sign, G9-42 or G9-43 should be used only on the approach to an intersection where it is impractical to provide individual G9-7 type signs above each lane, or they are not warranted, or advance information is needed before turn lanes are fully developed, but where—

- (a) unconventional lane arrangements occur, such as ‘trap’ turning lanes; or
 (b) there is a complex set of alternative lane movements from which a driver must choose.

Examples of these signs are shown in Figure 2.6.

The G9-42 sign should be used on high-volume approaches, especially in situations where overhead lane designation signs would be desirable but cannot be provided. The double-headed arrow indicates that the added lane or diverge begins beyond the sign position.

Signs in the G9-43 series should be provided on roads with lesser volume. They may be used with or without destinations or road names associated with the arrows. The white patch shall be used to indicate a turning lane which begins beyond the sign position. Signs in the Series are designated as follows:

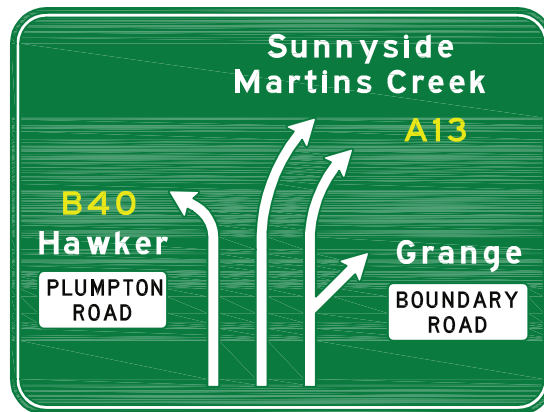
- (i) *G9-43-1* No destinations or added lane.
- (ii) *G9-43-2* Added lane but no destinations.
- (iii) *G9-43-3* Destinations but no added lane.
- (iv) *G9-43-4* Both added lane and destinations.

If the signs are used without destinations or road names, adequate direction signing shall be provided separately to indicate the destination of each lane. If one or more routes beyond the intersection are numbered, the Route marker(s) shall always be shown against the relevant arrowhead(s).

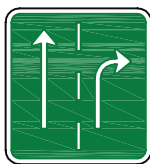
Sign G9-43-4 also shows the arrangement for using a supplementary panel to indicate the location at which the lane allocation occurs. This type of panel should be used where the location is ambiguous or not visible from the sign position.

Diagrammatic signs of the G9-42 or G9-43 type should normally be side mounted, on whichever side of the carriageway affords the greatest prominence. If a lane indicated on the sign is not developed at the sign location, a sign of the type G9-43-2 or G9-43-4 shall be used.

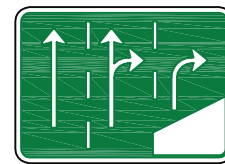
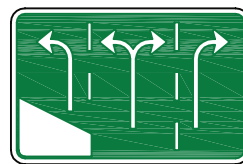
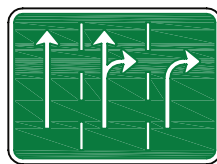
These signs shall only be used where drivers are otherwise likely to find difficulty in selecting the correct lane for their intended movement at the intersection.



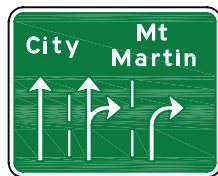
G9-42



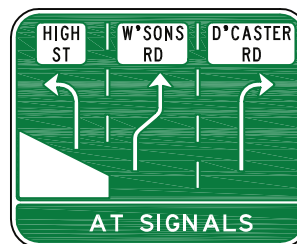
G9-43-1



G9-43-2



G9-43-3



G9-43-4

FIGURE 2.6 EXAMPLES OF MULTIPLE DIRECTION/LANE TYPE DRIVING INSTRUCTION DIAGRAMMATIC SIGNS

2.3.3 Turning instruction signs

Signs of the type G9-8 may have the alternative legends NEXT LEFT (RIGHT), TURN LEFT (RIGHT) X km where advance information in addition to the normal Advance Direction sign is required and the use of advance lane indication signs is not appropriate.

2.3.4 Variable lane designation signs

Assemblies of signs of the type G9-7 (see Clause 2.3.1), arranged so that there is a directional arrow over every lane at the sign position, may comprise one or more signs where the arrow direction or destination name may be able to be changed. Typically this would be required where a different lane allocation on the approach to an intersection is required between peak direction and off peak, or peak direction and counter peak direction.

Sign panels in this category may comprise white legend on black or green background.

Overhead lane control signs as specified in AS 1742.14, may be required in conjunction with these signs.