

Part 15 Direction signs, information signs and route numbering

2003 Edition

First Issue 25th May, 2009

Second Issue 1st August, 2011

Third Issue 2nd April, 2012

Fourth Issue 18th November, 2013



Queensland Government

(Blank)

PREFACE

Part 15 of the Manual sets out the principles for use of direction and information signs that inform the road user of the direction and distance to a place on the route being followed or along another road that intersects that route.

They may also supply information to identify points of geographical, historical or tourist interest and give directions to service and accommodation facilities. The main types of direction signs providing intersection direction are as follows:

Advance direction;

Intersection direction;

Fingerboard;

Reassurance direction;

Route markers; and

Freeway guide.

Version History: 2003 Edition

First Issue 25 May, 2009

Second Issue 1st August, 2011

Third Issue 2nd April, 2012

Fourth Issue 18th November, 2013

CONTENTS

SECTION 1. SCOPE AND GENERAL	15-5
1.1 SCOPE	15-5
1.2 REFERENCED DOCUMENTS	15-5
1.3 DEFINITIONS	15-5
1.4 RESPONSIBILITY AND AUTHORITY FOR INSTALLATION	15-6
1.5 PRINCIPLES OF GOOD SIGN PRACTICE	15-6
1.6 SIGN DESIGN GUIDELINES	15-6
1.7 INSTALLATION AND LOCATION	15-13
1.8 MATERIALS AND MANUFACTURING SPECIFICATIONS	15-13
SECTION 2. DIRECTION SIGNS AT AND NEAR INTERSECTIONS	15-15
2.1 GENERAL	15-15
2.2 ADVANCE DIRECTION SIGNS	15-16
2.3 DRIVING INSTRUCTION DIRECTION SIGNS	15-21
2.4 INTERSECTION DIRECTION SIGNS AND FINGERBOARDS	15-24
2.5 REASSURANCE DIRECTION SIGNS	15-29
2.6 TYPICAL ARRANGEMENT DIAGRAMS	15-30
SECTION 3. EXPRESSWAY DIRECTION SIGNS	15-38
3.1 GENERAL	15-38
3.2 PROVISION OF SIGNS	15-38
3.4 ADVANCE EXIT AND EXIT DIRECTION SIGNS	15-40
3.5 SUPPLEMENTARY ADVANCE SIGNS	15-44
3.6 REASSURANCE AND INTERCHANGE SEQUENCE SIGNS	15-46
3.7 DIRECTION SIGNS AT RAMP TERMINALS	15-46
3.8 SIGNS ON APPROACH TO AND ALONG TOLLED EXPRESSWAYS	15-47
3.9 TYPICAL DIRECTION SIGN TREATMENT	15-48
SECTION 4. ROUTE NUMBERING	15-54
4.1 GENERAL PRINCIPLES	15-54
4.2 TYPES OF ROUTE NUMBERING	15-54
4.3 THE ALPHANUMERIC SYSTEM-DESCRIPTION AND USE	15-55
4.4 DISPLAY OF NUMBERS	15-56
SECTION 5. GENERAL INFORMATION SIGNS	15-61
5.1 GEOGRAPHICAL FEATURE SIGNS (G6)	15-61
5.2 KILOMETRE POSTS	15-62
5.3 NON-STANDARD INFORMATION SIGNS	15-63
APPENDICES	
A GUIDELINES FOR THE LAYOUT OF LEGEND ELEMENTS ON DIRECTION SIGNS	15-65
B INSTALLATION AND LOCATION OF SIGNS	15-67

**DEPARTMENT OF TRANSPORT AND MAIN ROADS
Queensland**

Manual of Uniform Traffic Control Devices

**PART 15 – DIRECTION SIGNS, INFORMATION SIGNS AND ROUTE
NUMBERING**

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE

This Part of the Manual 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 Part 5 of the Manual.
- 2 Tourist and services signs are covered in Part 6 of the Manual.
- 3 Direction signs for bicycle facilities are covered in Part 9 of the Manual.

1.2 REFERENCED DOCUMENTS

AS

- | | |
|------|----------------------------------------------------------------------------------------------|
| 1348 | Roads and traffic engineering - Glossary of terms |
| 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 | Part1: Retroreflective materials |

Austrroads

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

1.3 DEFINITIONS

For the purposes of this Part of the Manual 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 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 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 Part 4 of the Manual.

1.4 RESPONSIBILITY AND AUTHORITY FOR INSTALLATION

The Transport Operations (Road Use Management) Act provides that Official Traffic Signs shall be installed only by the authority of the Director-General, Transport and Main Roads or a local government. The Act also provides that any such sign shall be installed in accordance with the methods, standards and procedures prescribed in this Manual.

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 Part 6 of the Manual.
- (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 in Appendix D in Part 2 of the Manual.
- 2 Guidelines for the sizing and spacing of legend elements on guide and information signs are given Appendix A.

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

I 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.

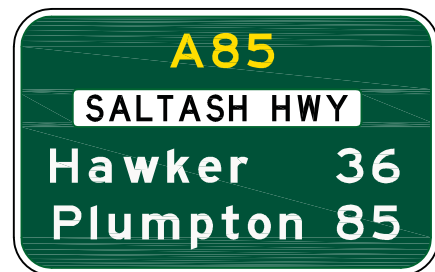
NOTE: A simple roundabout in this context would be one having not more than four legs total and a central island small enough and low enough for drivers to be able to see all legs on approach to the roundabout.

- (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.

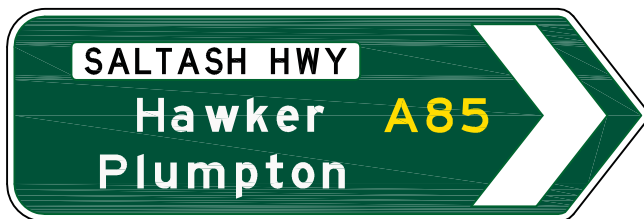
Advance exit and exit direction signs on expressway type facilities, other than diagrammatic advance signs, see Item (c), are in this category.



(a) Advance direction signs



(b) Reassurance direction signs



Category 1 (Major)



Category 2 (Minor)



Category 3 (Fingerboard)

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



(a) Advance direction sign



(b) Intersection direction sign—
Category 1 only

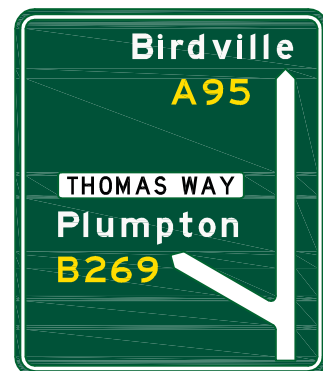
FIGURE 1.2 DIRECTION SIGN FORMATS LIST (STACK) TYPE-NARROW FORMAT



(a) Offset side roads
(Advance signs only)



(b) Large or complex
roundabouts
(Advance signs only)

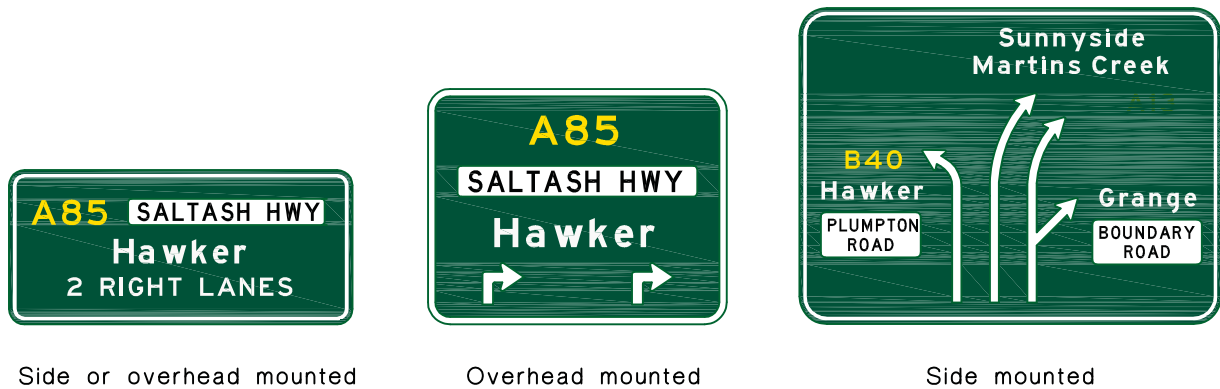


(c) Advance exit—
expressway type roads

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

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:

- (a) Distances up to 500 m - to nearest multiple of 50 m with the letter 'm' shown after the numerals.
- (b) Distances between 500 m and 1 km - to nearest multiple of 100 m with the letter 'm' shown after the numerals.
- (c) 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) 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.
- (b) A route or street name should accompany a destination name on direction signs in the following cases:
 - (i) At the beginning of a named route.
 - (ii) 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 Part 5 of this Manual) 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.
- (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 D in Part 2 of the Manual. 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.

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)

millimetres

Sign type	Sign number(s)	Legend type	Sign location	
			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	160E.Mod/120 l.c 120 DM (see Note 5) 160 EN 160 EN	240E.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	180E.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 Road name Driving instruction Route number	400 E.Mod/300 l.c 300 EM 350 EM 400 E	640 E.Mod/480 l.c 480 EM 560 EM 640 E	320 E.Mod/240 l.c 240 EM 280 EM 320 E
Reassurance direction	GE4-1 GE1-9	Destination Road name Route number	240E.Mod/180 l.c 180 EM 240 E	- - -	180E.Mod/135 l.c 140 EM 180 E
Supplementary advance exit	GE1-8	Destination Road name Driving instruction Route number	320 E.Mod/240 l.c 240 EM 280 EM 320 E	400 E.Mod/300 l.c 300 EM 350 EM 400 E	240E.Mod/180 l.c 180 EM 210 EM 240 E
Advance and intersection direction on exit ramps	G1 Series, G2 Series	Destination Road name Route number	180E.Mod/135 l.c 160 EM 180 E	240E.Mod/180 l.c 180 EM 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.

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 Clause 1.7.6 in Part 1 of this Manual, 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 B.

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	Advance 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

TABLE 1.3 USE OF ARROW TYPES ON DIRECTION SIGNS (cont.)

Arrow Shape	Advance Direction Signs Stack type: G1-1 G1-2 G1-4 G1-6	Advance 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	
	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				
	The usual indication of a left turn, including at a minor stagger or angle	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 Part 5 of this Manual 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.

2.1.1 Application principles

The following general principles apply to the use of guide signs:

- (a) *Location.* Roadside guide signs generally should be located on the left side of the road. In some circumstances signs may be mounted above the roadway (see Part 1 of this Manual).

The lateral placement and height of guide signs shall be in accordance with Part 1 of this Manual. Very large roadside signs may require special consideration, while special circumstances of road layout and the adjacent topography may also warrant departures from the requirements given.

Guide signs should not normally be erected in medians unless they have special relevance to traffic travelling in the median lane or where, in special cases, a sign is required to supplement a similar sign on the left side. In urban situations with wide medians and roadside development, mounting of signs within the median may be unavoidable.

At channelised intersections some guide signs need to be erected in traffic islands or on the right side of some roadways. They should, if practicable, be within a driver's normal line of vision as he/she approaches the intersection, or, if this cannot be achieved, should be on the side of the intersection where the driver is likely to be looking if he/she is required to execute a turn. However, the signs should not obscure a driver's vision of traffic approaching along a conflicting path or of pedestrians.

- (b) *Mounting.* Guidance on the size and number of supports required together with typical mountings and the spacing between posts are given in Part 1 of this Manual.

In urban areas where large signs need to be erected in the footpath, the sign and its supports should present a pleasing appearance. Supporting posts should not be erected where pedestrians are likely to walk into them at night. Supporting structures which completely span a footpath with supports on each side are undesirable. Single post mounting should be considered in such cases.

Recommended lateral positioning of signs is shown in Figure 2.4. Sign supports should be erected as far as practicable away from the edge of the roadway subject to any maximum offsets shown in Figure 2.4 and any constraints on visibility due to roadside obstructions.

On high-speed roads the use of breakaway supports should be considered for larger roadside signs where they are likely to be struck by vehicles. Alternatively, the sign supports should be placed behind any guard fence erected for another purpose, if this is in an appropriate location.

Typical methods of supporting overhead signs are shown in Figure 2.5.

Sign panels should be erected in a vertical plane slightly angled away from the driver's line of sight as shown in Part 1 of this Manual, to avoid specular reflection from vehicle headlights.

- (c) *Distance.* Where distances are given on guide signs they should be shown as follows:

- (i) Distances up to 500 m: to nearest multiple of 50 m.
- (ii) Distances between 500 m and 1 km: to nearest multiple of 100 m.
- (iii) Distances of 1 km or more: to the nearest km.

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.
- (c) on sub-arterial routes intersecting arterial routes; or
- (d) in advance of intersections where the arterial route may be confused with another road.

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).

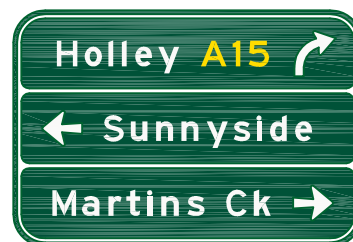
If a route number applies to only one destination it should be located adjacent to the arrow. Where one number or route name applies to two destinations in different directions, sign G1-4, see Figure 2.1(e) should be used and the number or route name, or the two, one above the other if both are used,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



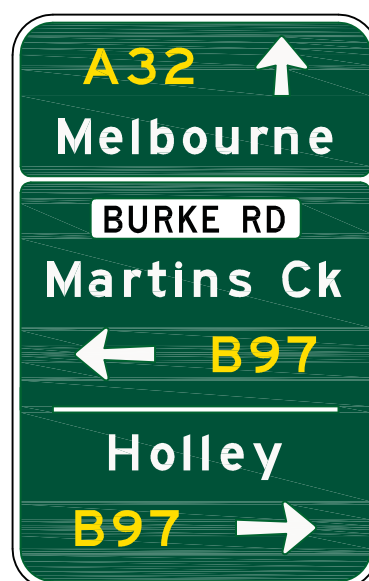
(c) Sign No G1-1 (showing a direction to a distant route supplementing or used in place of a focal point)



(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: Department of Transport and Main Roads has standard maps showing principal destination names to be used along routes in the State to maintain consistency in the use of such names. These maps are determined and held at Regional level.

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.

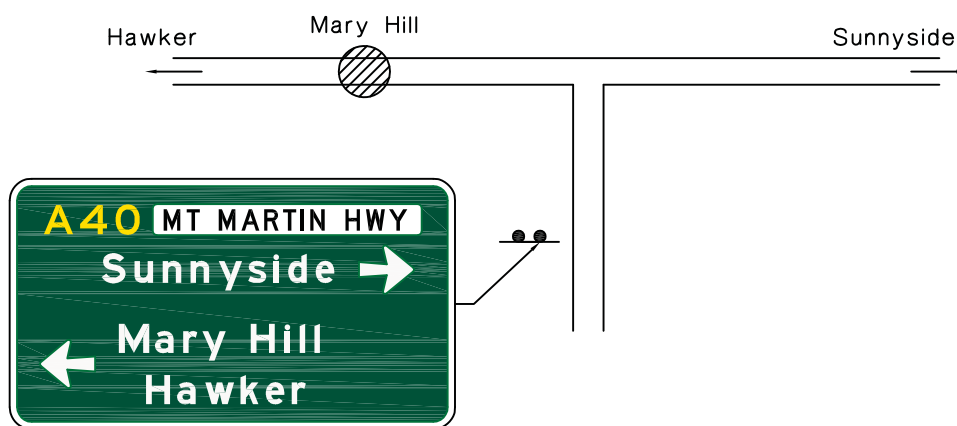


FIGURE 2.3 SIDE ROAD DESTINATIONS - SMALL TOWN ON THE MAIN ROUTE NEAR THE JUNCTION

The inclusion of the names of streets or routes crossing or branching from the main route along with destination names in the relevant sign panel, should be considered in situations such as –

- (a) urban routes intersecting with other important routes; or
- (b) rural routes intersecting with a named highway or other important named route.

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. However, if the distance from the sign to the intersection is greater than normal, or further than a driver may otherwise expect, the distance to the intersection may be shown on a supplementary distance plate beneath the sign.

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

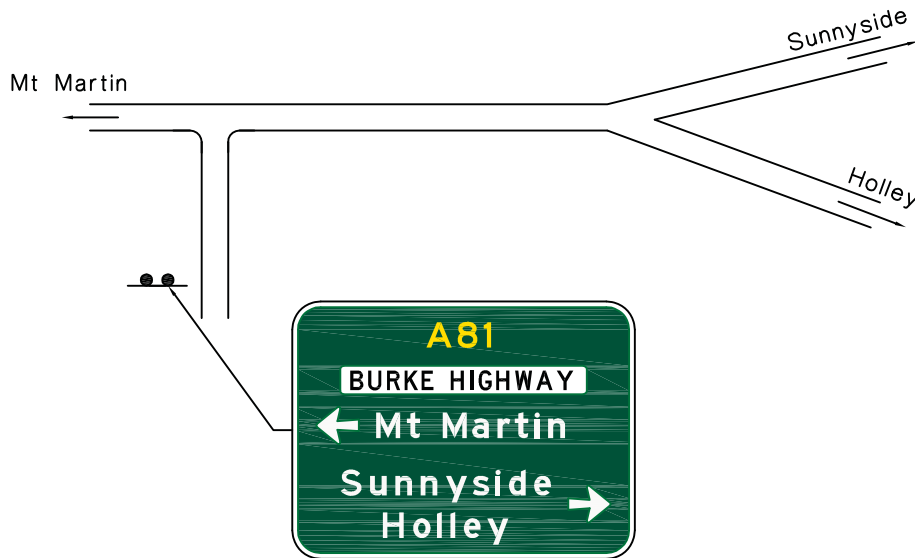


FIGURE 2.4 SIDE ROAD DESTINATIONS-MAIN ROUTE DIVIDES BEFORE A TOWN IS REACHED

2.2.4 Location and mounting

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

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

V₈₅, 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 D in Part 2 of this Manual). 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:

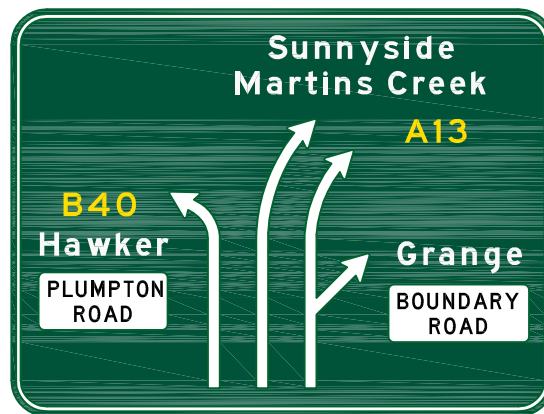
- (i) G9-43-1 No destinations or added lane,
- (ii) G9-43-2 Added lane but no destinations,
- (iii) G9-43-3 Destinations but no added lane,
- (iv) G9-43-4 Both added lane and destinations.

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).

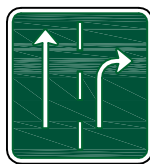
Sign G9-43-4 also shows the arrangement for using a supplementary panel to indicate the location at which the lane allocation occurs. This type of panel should be used where the location is ambiguous or not visible from the sign position.

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.

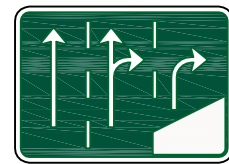
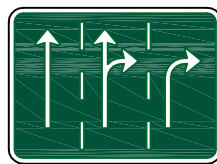
These signs shall only be used where drivers are otherwise likely to find difficulty in selecting the correct lane for their intended movement at the intersection.



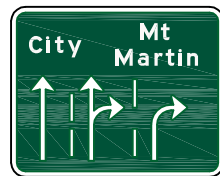
G9-42



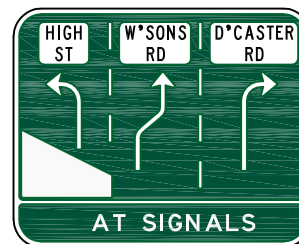
G9-43-1



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 Part 14 of this Manual, may be required in conjunction with these signs.

2.4 INTERSECTION DIRECTION SIGNS AND FINGERBOARDS

2.4.1 Function and classification

Intersection direction signs or Fingerboards are required at intersections to indicate the road name or destination, or both, along intersecting legs and include the through direction if this is not clear to road users either approaching or within the intersection. At channelized intersections and roundabouts the signs are required to show the directions at the points of departure from the intersection.

Intersection direction signs of the appropriate type shall be provided as follows:

- (a) At any intersection between arterial roads, sub-arterial roads or a combination of the two types - signs for all legs including confirmation of a through route where necessary.
- (b) At an intersection of an arterial or sub-arterial road with a minor street or road-at least a sign naming the minor road or street, or directing traffic along it.

Intersection direction signs are classified as follows:

- (i) Type 1, Major Intersection Direction signs, see Clause 2.4.2.
- (ii) Type 2, Minor Intersection Direction signs, see Clause 2.4.3.
- (iii) Type 3, Fingerboards, including rural Road Name boards, see Clause 2.4.4.
- (iv) Street Name and Community Facility Name signs, see Part 5 of the Manual.

2.4.2 Major Intersection Direction Signs (Type 1)-Description and use

Single end with point and chevron, G2-1

Single square end with arrow, G2-2

Double end with two points and chevrons, G2-4

Narrow format, G2-5

Examples of these signs are illustrated in Figure 2.7.



G2-1



G2-1



G2-1



(a) Sign No G2-1 (chevron ended)



G2-2



G2-5



(b) Sign No G2-2 (square end with arrow)



(c) Sign No G2-5 (narrow format)



(d) Sign No G2-4 (double chevron ended)

FIGURE 2.7 EXAMPLES OF MAJOR (TYPE 1) INTERSECTION DIRECTION SIGNS

Major Intersection Direction signs (Type 1) shall comprise a standard green background with white border, white chevron arrow, and either -

- (a) one or two (maximum) destination names in white lowercase letters; or
- (b) the above with a road name panel within the white border, comprising a white rectangular panel with the road name in black upper case; or
- (c) a black on white road name panel as above, alone on the green background.

A route number if required shall be provided as specified in Clauses 2.4.7 and 4.4.

Distance numerals if required, see Clause 2.4.6, shall be provided as set out in Clause 2.4.7.

The signs shall be either wide or narrow format, see Clause 1.6.3. The following requirements and recommendations also apply:

- (i) *Wide format* Where the destination indicated on the sign is approximately at right angles to the approaching traffic, the end of the sign should normally be shaped to a point with a chevron inside the point to indicate the direction, as in the G2-1 type sign. A single chevron may also be used for a sign having up to three lines of legend in a vertical stack.

Where the destination is at 45 degrees or straight ahead to approaching traffic, an arrow shall be used as in the G2-2 type sign and the end of the sign shall be square, see Figure 2.7. A square ended sign should also be used to indicate a horizontal direction when mounted with one or more signs indicating an angled or straight ahead direction.

The double-ended sign, G2-4, should be used typically at a T-junction to indicate destinations along the continuing road (i.e. the bar of the T).

- (ii) *Narrow format* This format should be used where lateral space is restricted, e.g. at some urban intersections. It comprises a rectangular sign, (G2-5), which has an arrow (and route number) above the destination (straight ahead indications), or below the destination (horizontal and angled indications). This format should be used only when a wide format sign will not fit the available space (see Figure 2.13).

Major Intersection Direction (Type 1) signs should be used at intersections of two or more rural or urban arterial roads, or turnoffs from arterial roads to towns or other significant named traffic generators including community and tourist facilities. Signs in this category will normally be required where there are advance signs on the approach.

2.4.3 Minor Intersection Direction Signs (Type 2) - Description and use

Minor Intersection Direction sign, G3-3

Road Name Panel, G3-4

Road Name Sign, G3-5

Advance Street Name Sign, G3-8



G3-3



G3-4



G3-5



G3-8

Minor Intersection Direction signs (G3-3) shall comprise a standard single or double ended green background sign with pointed end (no border) and one or two white destination names and chevron for each direction shown, together with white distance numerals if required. If a road name is required in addition, the black and white Road Name panel, G3-4 shall be mounted on top of the G3-3 sign. A route number may be placed on the sign in accordance with Clauses 2.4.7 and 4.4. The route number should not be placed on the G3-4 sign.

If a road name only, is required, either a Street Name sign in the G5 Series on urban roads, see Part 5 of this Manual or a Road Name sign, G3-5, comprising a black legend and chevron on a white background for rural roads, shall be provided. The G3-8 sign may be used in rural areas at the beginning of a turn lane provided for the streets signed with a Road Name sign, G3-5.

Minor Intersection Direction (Type 2) signs should be used on rural arterial roads at all minor turnoffs to named destinations, i.e. wherever a Type 1 sign is not warranted, and on urban arterial roads at intersections with sub-arterial roads which lead to named destinations. Signs placed to face traffic entering the arterial road from the minor road to indicate directions along the arterial road should also be Type 2 signs.

2.4.4 Fingerboards (Type 3 Intersection Direction signs)-Description and use

Fingerboard, G3-6

Route Number panel, G3-7



G3-6



G3-7

A Fingerboard (G3-6) shall comprise a single or double ended sign with point and chevron at one or both ends and one destination name only associated with each point. The destination name and distance numerals shall be white upper case on a standard green background. If a route number is required it shall either be placed on the sign as specified in Clauses 2.4.7 and 4.4 or placed on a Route Number panel (G3-7) mounted above or below the sign if the sign board would otherwise be too long.

If a road name is to be shown by itself or in conjunction with a Fingerboard, a Street Name sign in the G5 Series, see Part 5 of this Manual, shall be used. In rural areas black legend on white background should be used to distinguish the sign from the G3-6 Fingerboard signs.

Fingerboards are appropriate for use on low speed or low volume, generally non-arterial roads in rural areas and on sub-arterial or low speed arterial roads in urban areas where the need for prominence in a complex visual urban environment is not an issue.

2.4.5 Signs to tourist attractions

Intersection direction signs and Fingerboards directing to major tourist attractions as described in Part 6 of this Manual shall be designed as specified above except that the sign backgrounds shall be brown.

2.4.6 Legend selection

The number of names on an Intersection Direction sign or group of Fingerboards pointing in any one direction shall not exceed two destination names plus one road name.

Where Advance Direction signs are used, the names shown on Intersection Direction signs shall be the same as those used on the Advance Direction sign including directions to a distant route used to supplement or in place of a focal point. If there are no Advance Direction signs, the choice of names should follow the principles given in Clause 2.2.3.

Distance numerals shall be shown on all Intersection Direction signs in rural areas and on Fingerboards showing destinations except where Reassurance Direction signs (see Clause 2.5) are erected beyond the intersection. This exception will usually only apply in respect of Type 1 signs. Distances should be shown as set out in Clause 1.6.4. Distance numerals are placed on signs as specified in Clause 2.4.7.

Recommended minimum letter sizes are given in Table 1.1.

2.4.7 Display of route numbers and distances

Where either route numbers or distance numerals or a combination of the two are to be shown on Type 1 wide format, Type 2 or Type 3 Intersection Direction signs they shall be displayed as set out below.

NOTE: The following drawings show in outline, the relationship between the destination, distance numeral and route number elements on Intersection Direction signs. They are applicable to all three Categories. Internal road name panels on Type 1 signs are superimposed above these elements.

- (a) Distance numerals only on a single or double ended board - between the point/chevron/arrow and the destination name.



- (b) Route number only on a single ended board-between point/chevron/arrow and the destination name.



- (c) Route number only on a double ended board -
- (i) same number each direction-between the destination name; or
 - (ii) different number each direction-as for Item (b).

<< Destination A31 Destination >>

<< A31 Destination Destination B145 >>

- (d) Route number and distance numerals on a single ended board - one number between point/chevron/arrow and destination name, and the other at the opposite end.

<< 63 Destination A32 >

- (e) Route number and distance numerals on a double ended sign - distance numerals at point/chevron/arrow ends, route number between names.

NOTE: If the route number is different for each direction, the option of showing them on supplementary plates above or below the sign should be considered.

<< 63 Destination A31 Destination 73 >>

- (f) Route number and distance numerals both required on a double ended sign but route number different for each direction-the option of -
- (i) separate signs as shown in Item (d) for each direction; or
 - (ii) for Type 3 Fingerboards only, a double ended sign as shown in Item (a) with Route Number panels, G3-7, as shown in Clause 2.4.4.

2.4.8 Location

In addition to the general principles set out in Appendix B, the following requirements and recommendations apply. Intersection Direction signs and Fingerboards should be located within or near the intersection at the site where they are readily visible to approaching drivers. Treatments will depend on roadside development, other signs in the area, visibility, the background, and the need to avoid restricting intersection sight distance. They shall be located to show the precise point at which a turn must be made and should highlight the point of conflict with intersecting or entering traffic, especially when the intersecting pavement is not visible.

At simple cross or T-intersections they may be erected in an assembly typically comprising double ended signs for the through legs and single ended signs for the terminating leg, see Figure 2.10. Signs pointing along a side road or street should always be placed above through road signs in such assemblies. At complex channelized intersections and roundabouts the signs shall be located so that the route to be taken through and out of the intersection is clearly defined. At roundabouts the signs are required at each exit point from the circulating roadway.

Consideration may also be given to providing Type 3 Road Name signs at the beginning of turning lanes to minor side streets from urban arterial roads.

2.5 REASSURANCE DIRECTION SIGNS

Reassurance Direction sign, G4-1



2.5.1 Function

Reassurance Direction signs may be used to reassure motorists that they are travelling towards their intended destination and to indicate the distances to the destinations nominated as follows:

- Beyond major intersections, i.e. intersections warranting use of Advance and Type 1 Intersection Direction signs.
- On the outskirts of major towns facing traffic leaving the town.
- At the start of named routes.

2.5.2 Legend

The legend should not exceed five destinations, or the route name and four destinations. Legends shall include the appropriate destinations shown on the advance direction and intersection direction signs.

If the route is numbered, the number shall head the legend.

If the route is named, the name shall be shown above the destination list. The route number may be placed beside the route name or centrally above it.

Town (or suburb) names included are selected in accordance with the following:

- The next principal name place for the route shall be given.
- Subsidiary towns shown on prior direction signs shall be listed.
- Other destinations which should be considered are small towns which have tourist, historic, or geographic interest, or lie at the junction of a subsidiary route.
- If the road joins another route, town names on both routes may be included provided that they comply with Items (a), (b) or (c).
- On roads leading to capital cities, the name of the capital and its distance may be included as the last destination. If this principle is adopted, it shall apply to every reassurance sign on that route beyond the first on which it has been introduced.

The names should appear in the order of their distance from the intersection, with the shortest distance on the top of the sign.

The distance shown should be the distance from the sign to the recognized centre of each destination. Distances shall be given to the nearest whole kilometre.

If a destination named on the sign is on a road branching from the through route some distance beyond the sign, brackets should be placed around the line of legend containing the destination name and its distance. Brackets should not be used for destinations on a route where the route name has changed but is effectively a continuing route.

Recommended minimum letter types and sizes are given in Table 1.1 for non-expressway signs and in Table 1.2 for signs on expressway type roads.

2.5.3 Location

Signs should be located on the left side of the road 150 to 200 m urban and approximately 400 m rural, beyond the intersection, or at the town limits or at any other suitable location where such signs are considered desirable. The requirements of Appendix B also apply.

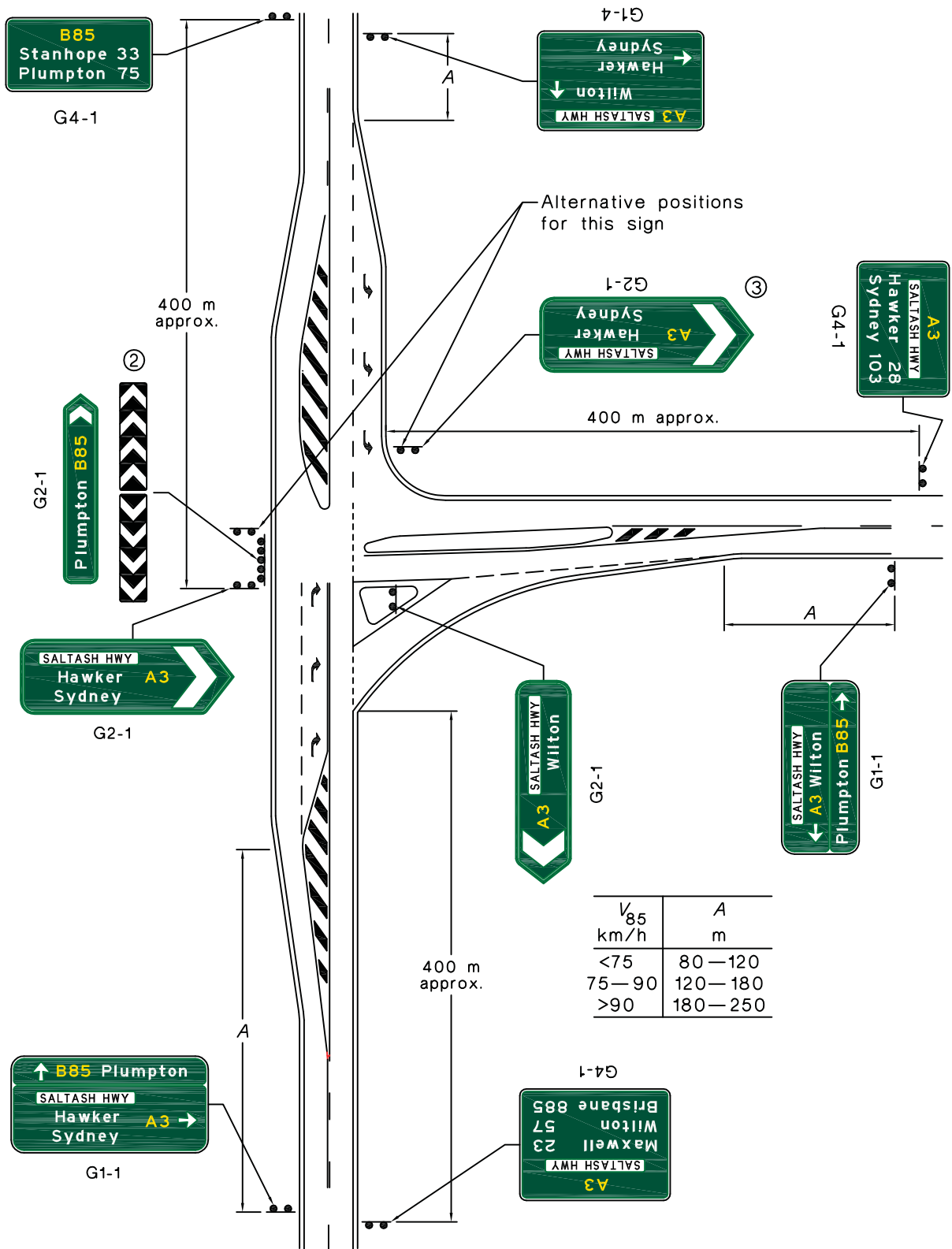
2.5.4 Aus-Link logo

The use of the Aus-Link logo shall be confined to reassurance direction signs in the G4 and GE4 series. If used, the logo shall be no greater in height than the route number. It may be located near the route number but not so close as to visually corrupt it.

These requirements shall also apply to any subsequent replacement for the Aus-link logo associated with the Federal funding of roads identified as National highways.

2.6 TYPICAL ARRANGEMENT DIAGRAMS

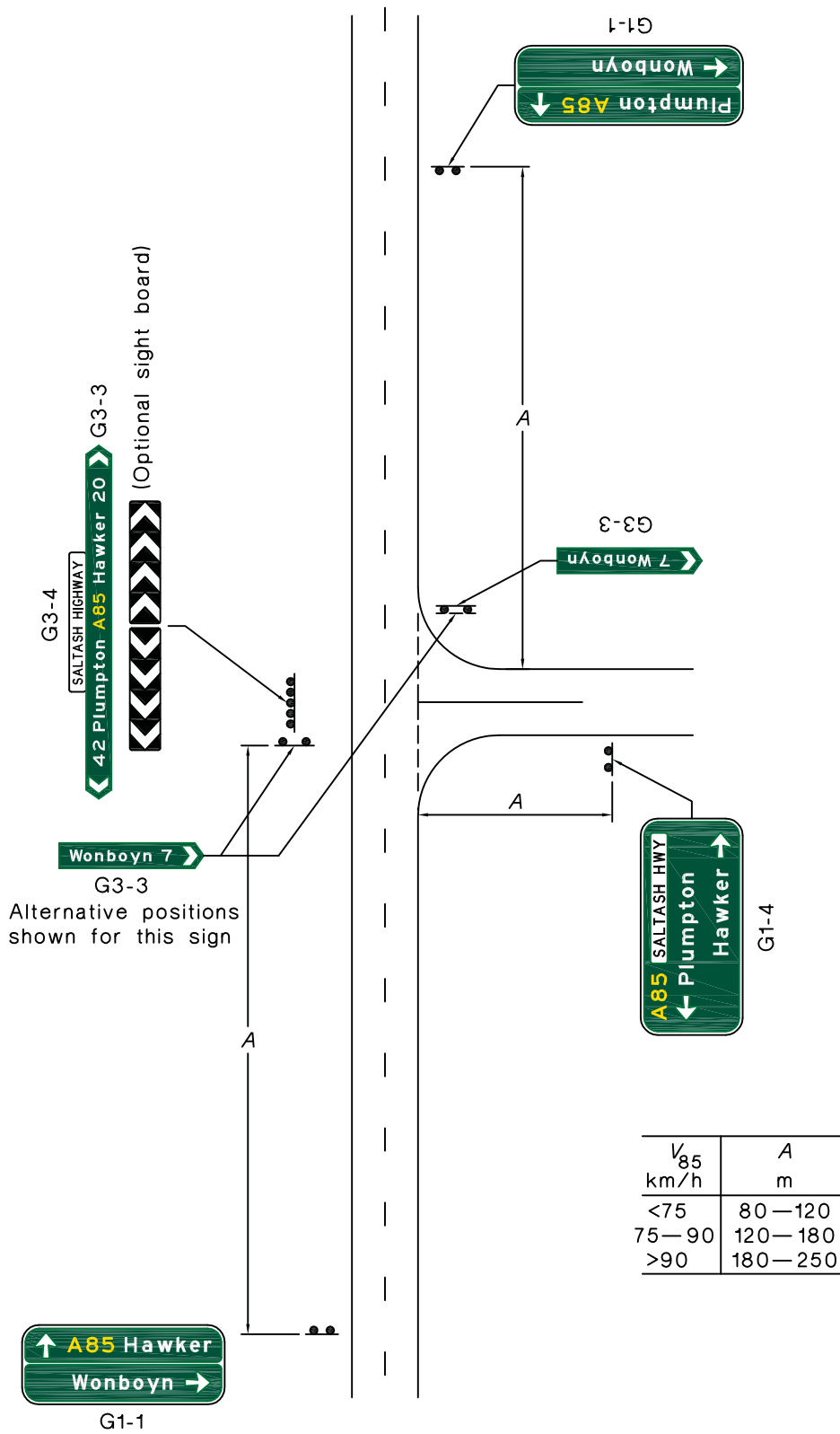
Typical locations of direction signs at various intersection types are illustrated in Figures 2.8 to 2.14.



NOTES:

- 1 Guides for the use of Type 1 Intersection Direction signs are given in Clause 2.4.2.
- 2 An assembly in the form of a T-intersection sight board, see Part 2 of this Manual, would normally be used in this position.
- 3 This sign may need to be located on the far right of the through road opposite the stem of the T if it would be a sighting problem to the right for entering traffic.

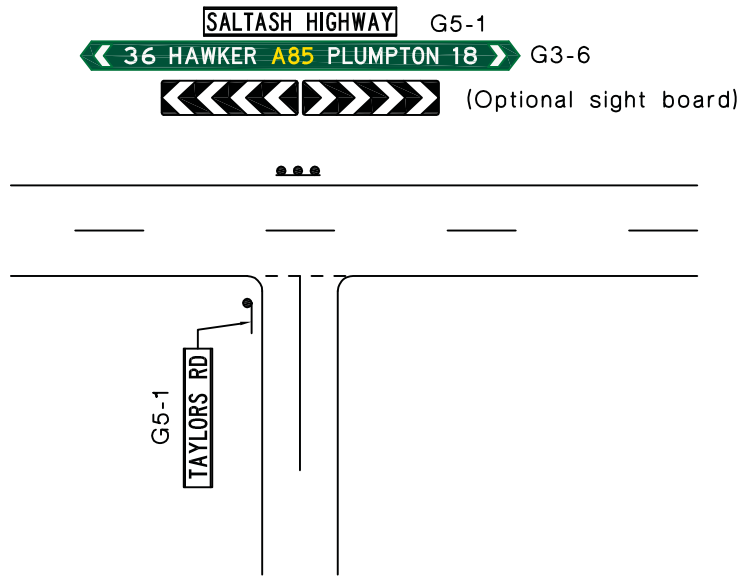
FIGURE 2.8 MAJOR RURAL INTERSECTION - USING TYPE 1 INTERSECTION DIRECTION SIGNS



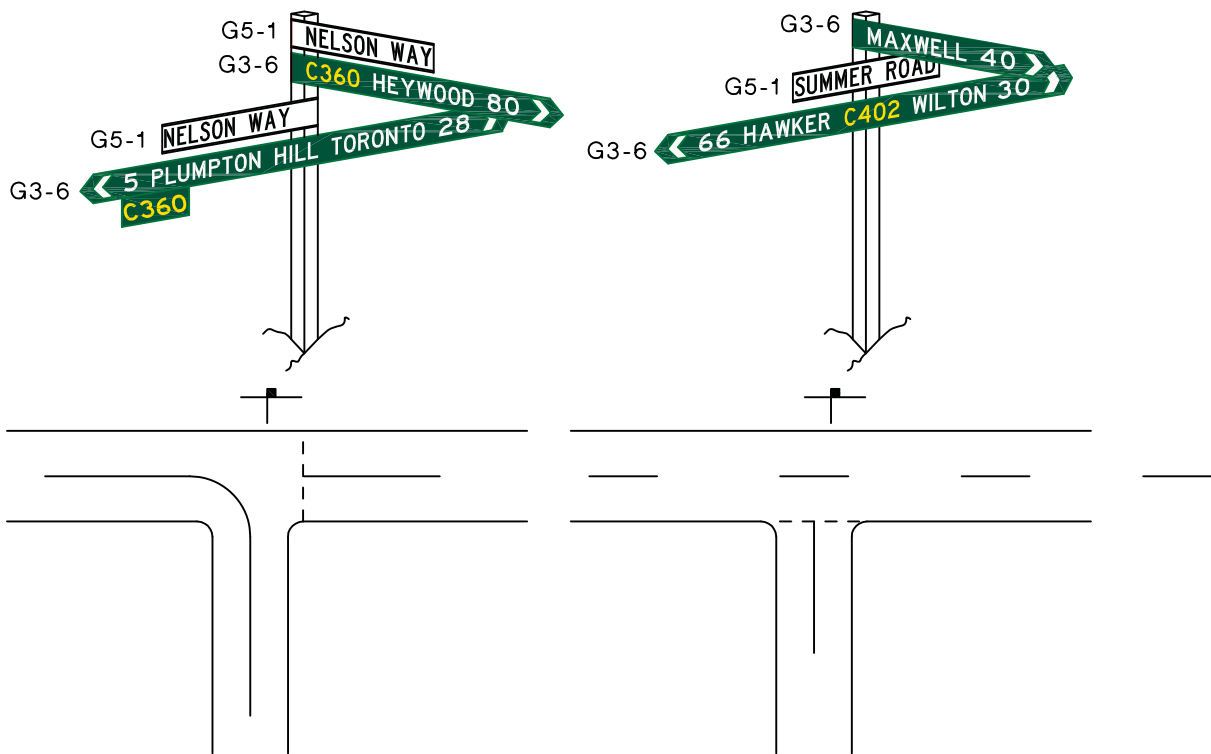
NOTES:

- 1 Guides for the use of Type 2 Intersection Direction signs are given in Clause 2.4.3.
- 2 Advance direction signs (i.e. G1-1 and G1-4) are optional in this case.

FIGURE 2.9 MINOR RURAL INTERSECTION - USING TYPE 2 INTERSECTION DIRECTION SIGNS



(a) Using T-junction sight board assembly



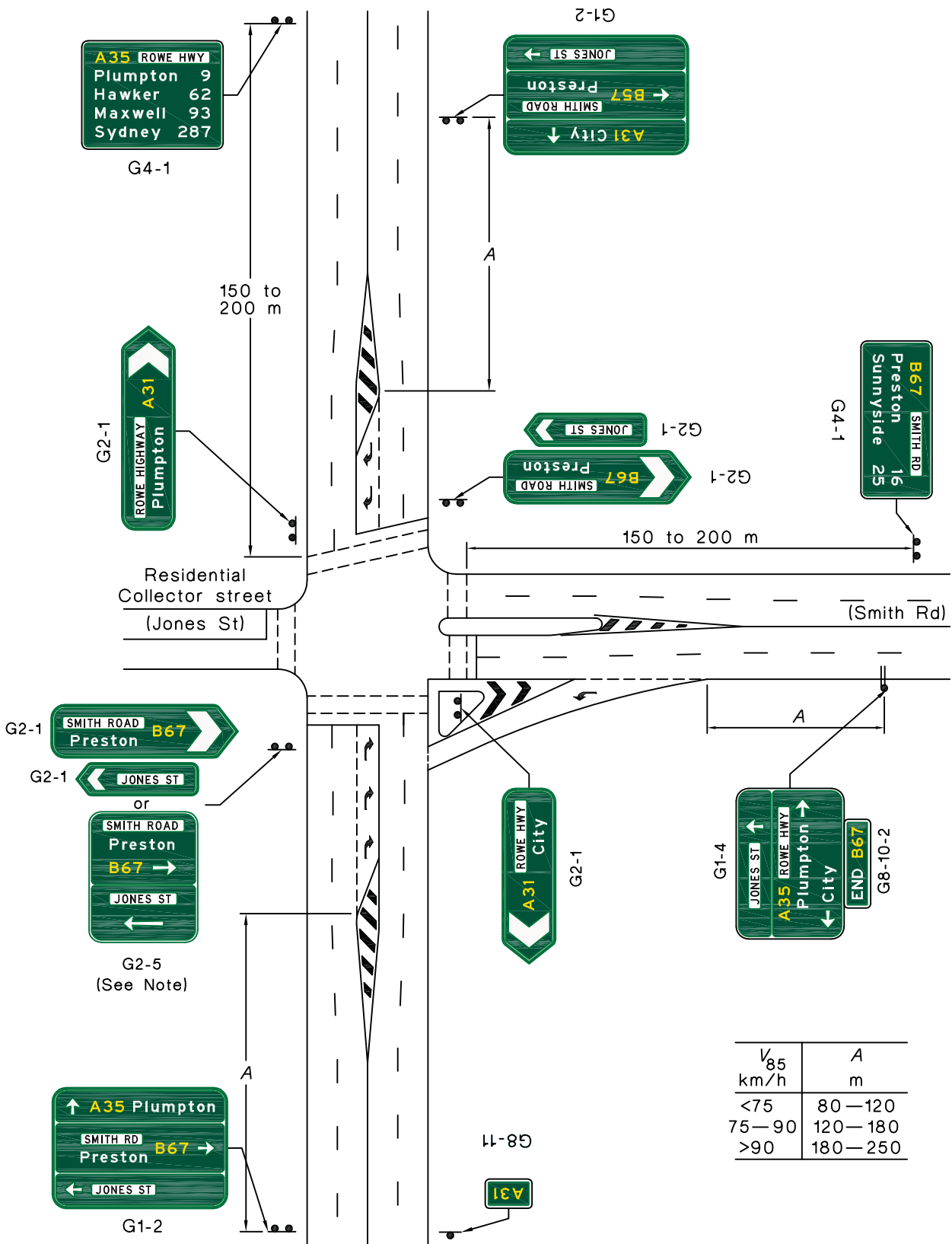
(b) Using fingerboard groups only

(a) Using T-junction sight board assembly

(b) Using fingerboard groups only

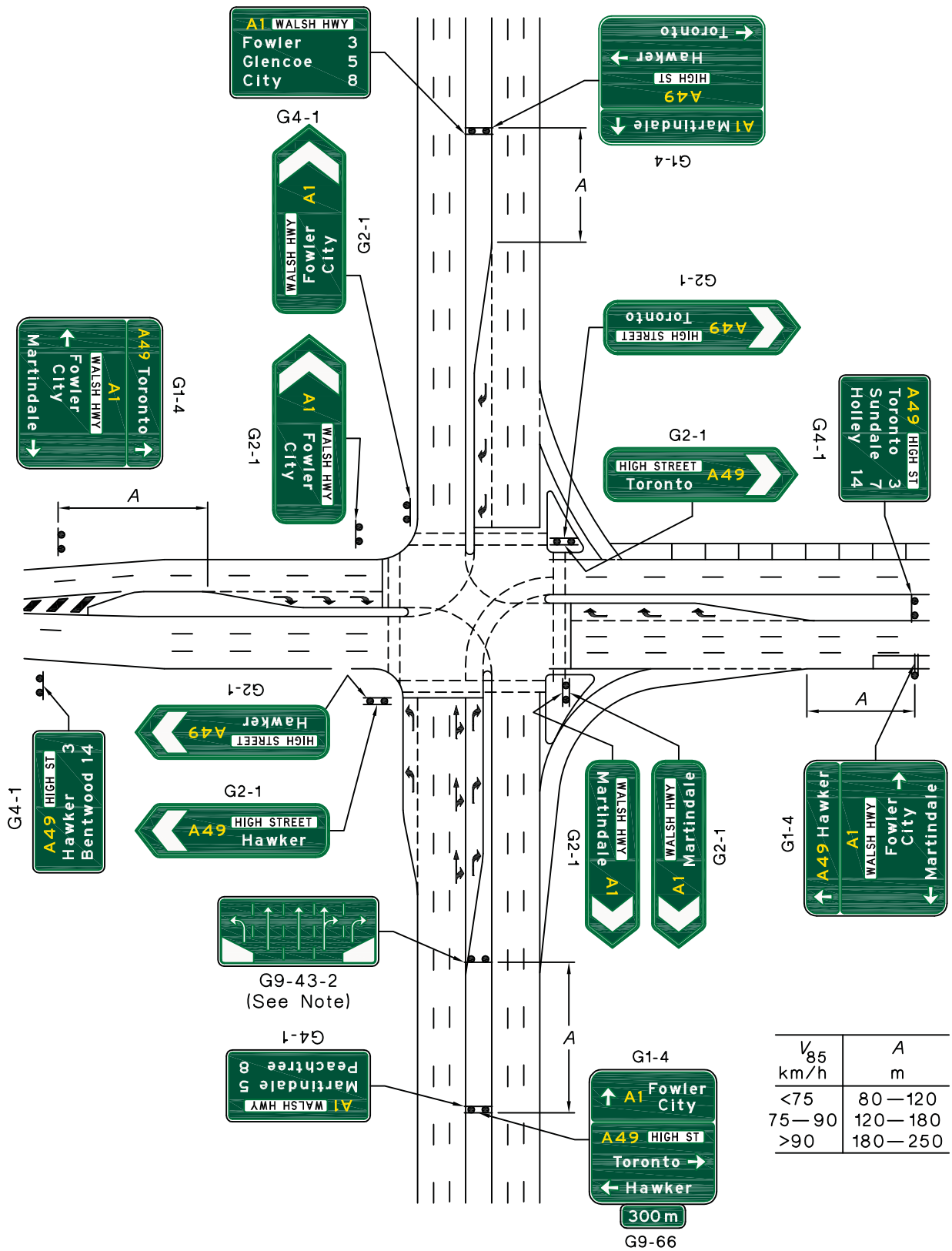
NOTE: Guides for the use of Type 3 Intersection Direction signs (Fingerboards) are given in Clause 2.4.4.

FIGURE 2.10 MINOR RURAL INTERSECTION - USING TYPE 3 FINGERBOARDS



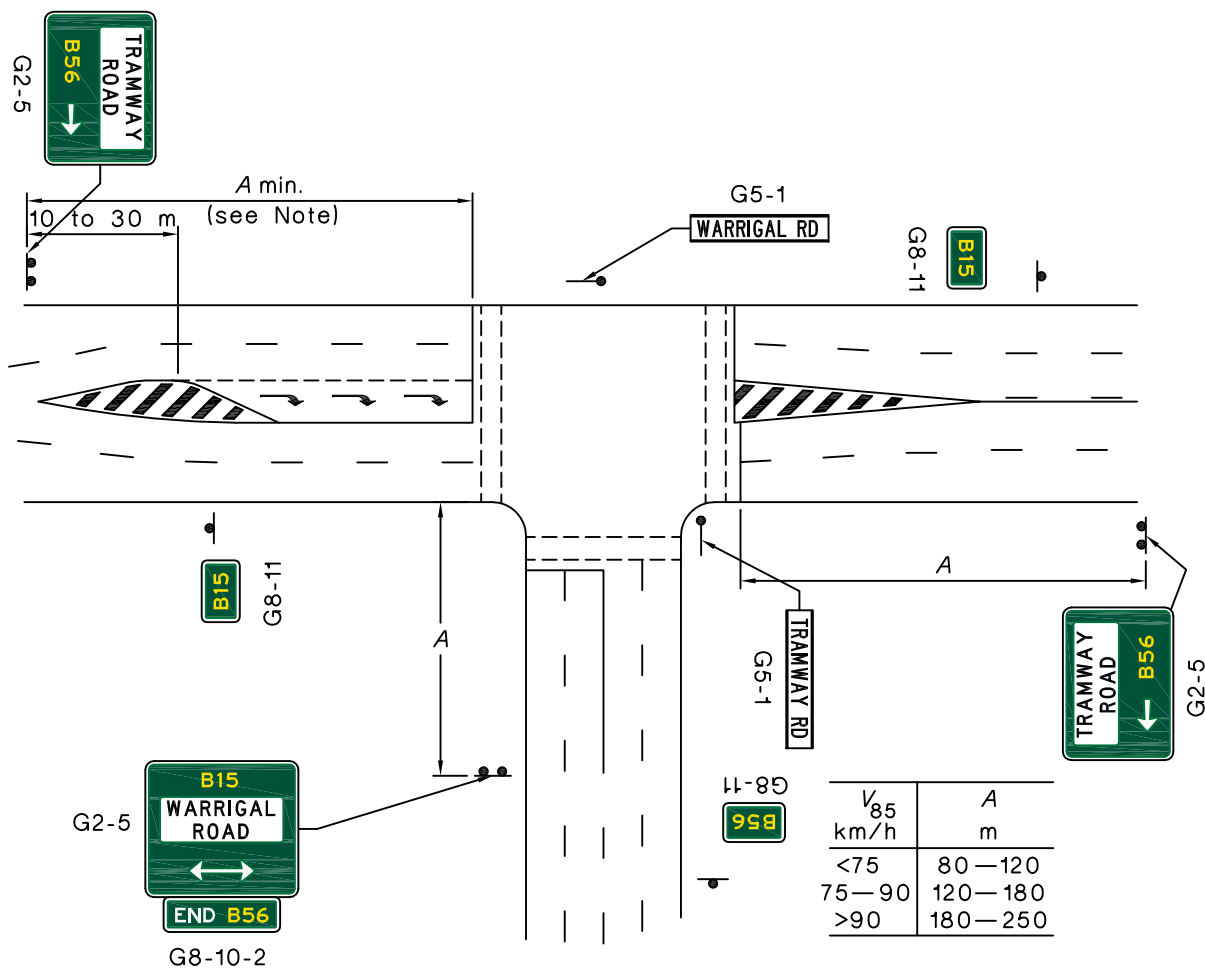
NOTE: The wide format intersection Direction (G2-1) sign, see Clause 2.4.2 is to be preferred to the narrow format (G2-5) wherever space allows.

FIGURE 2.11 MAJOR URBAN INTERSECTION

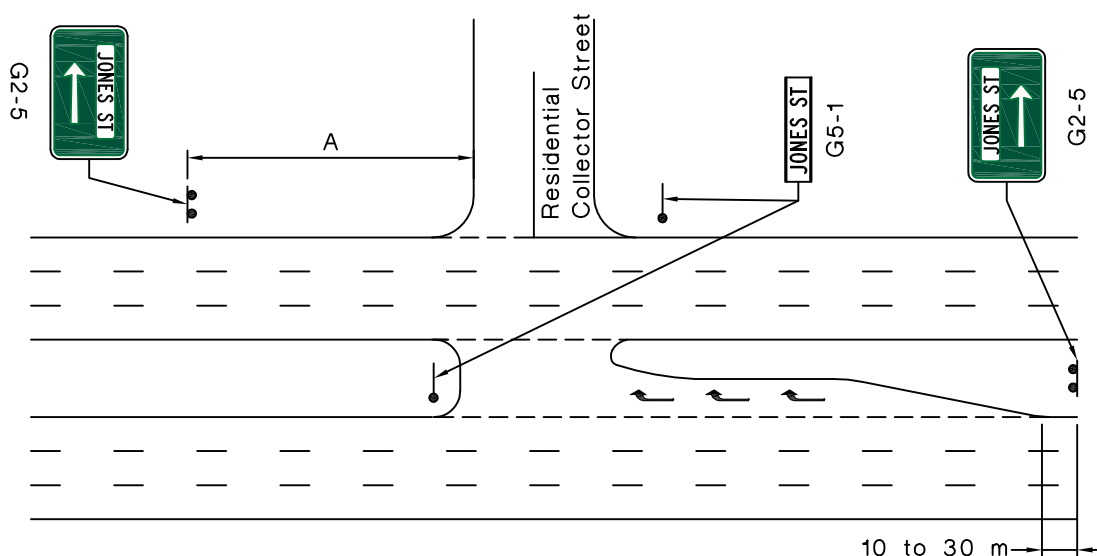


NOTE: The G9-43 sign will be required where there is an unusual lane allocation such as a trap lane or a layout of the type illustrated: The sign may need to be placed further in advance of the start of the turning lane depending on the degree of advance notice needed by drivers.

FIGURE 2.12 MAJOR URBAN INTERSECTION - DIVIDED ROAD



(a) Two sub-arterial roads



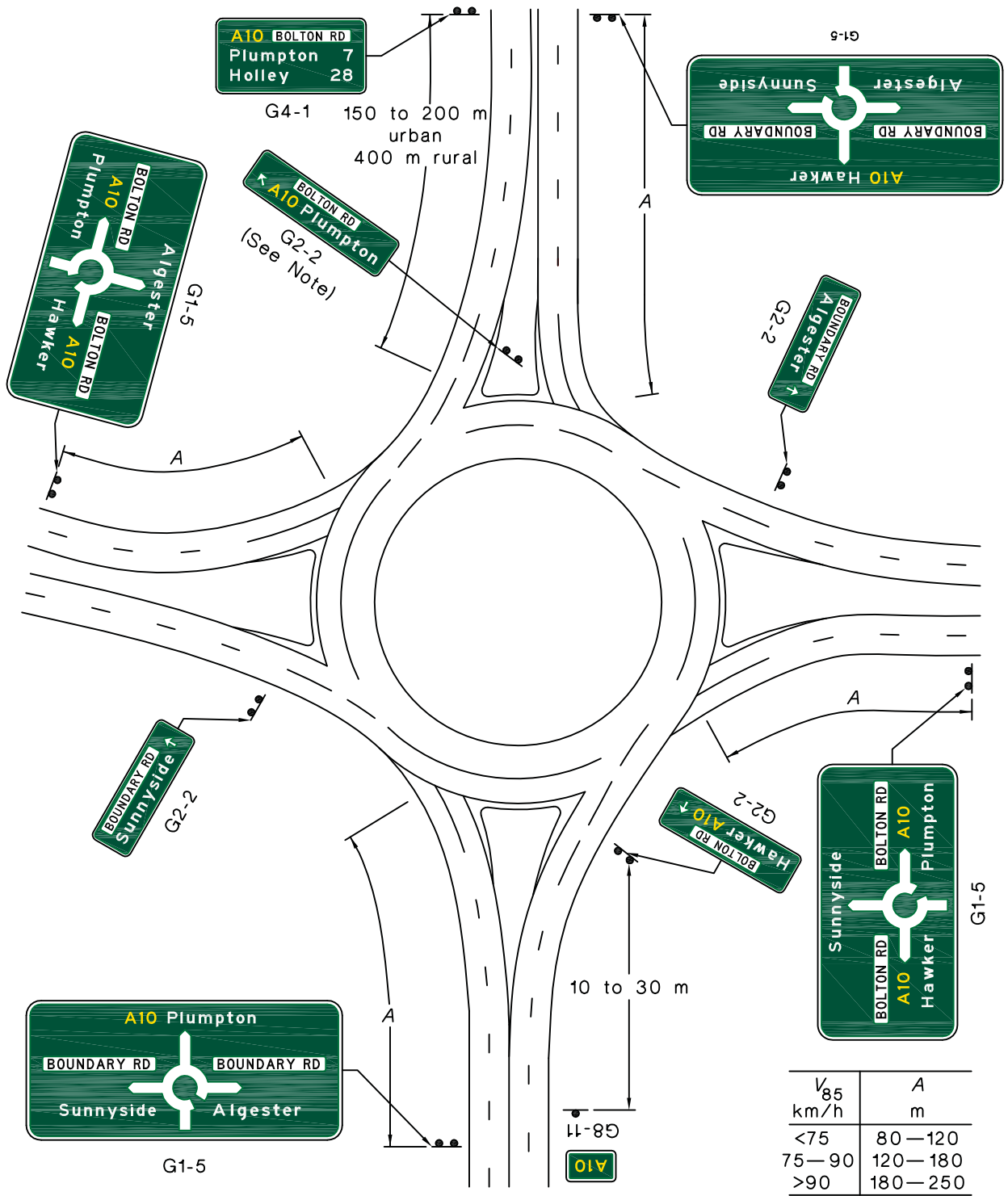
(b) Arterial road and collector street

(a) Two sub-arterial roads

(b) Arterial road and collector street

NOTE: Distance A will apply if it will place the sign more than 30 m from the start of the right turn taper.

FIGURE 2.13 MINOR URBAN INTERSECTIONS



NOTE: The intersection direction sign at each exit may be located on the island if it can be seen better by circulating traffic, and provided sight distance is not obscured. Otherwise it is placed on the left side of the exit as shown for other legs, ensuring that the arrow points clearly to the exit path rather than the continuing path around the roundabout.

A G2-2 sign with right hand horizontal arrow may be placed on the island if it is desired to confirm the direction to the next exiting leg.

FIGURE 2.14 ROUNDABOUT ON ARTERIAL ROAD

SECTION 3. EXPRESSWAY DIRECTION SIGNS

3.1 GENERAL

This Section specifies and gives recommendations for direction signs on expressway type roads at and on the approaches to exit ramps and expressway to expressway interchanges. It also applies to expressway type features such as isolated interchanges on non-expressway arterial roads. It includes signs at an interchange leading traffic onto an expressway from the local road system. Signs for intersections at grade should be provided in accordance with Section 2.

Signs in the following GE Series classifications are used:

- (a) GE1-5, GE1-6, GE1-13 advance exit signs-legend only.
- (b) GE1-11, GE1-12 advance exit signs-diagrammatic type.
- (c) GE1-14 Advance exit sign-lane allocation.
- (d) GE2-1, GE2-2, GE2-3-exit direction signs
- (e) GE1-8, GE1-9, GE1-15-supplementary advance exit signs.
- (f) GE4-1-reassurance direction signs.

Illumination and reflectorisation of signs are covered in Part 1 of this Manual.

3.2 PROVISION OF SIGNS

Expressway type roads and expressway elements built into other arterial roads warrant a high standard of direction signing to ensure that road safety and efficiency benefits are maximised. Furthermore the consequences of missing an exit as opposed to driving through an intersection are significantly more serious as they may lead to unsafe driver responses to correct the error.

Direction signs are therefore provided on these roads both in greater number than the minimum needed to give advance and positional guidance, and in larger size than the minimum required to meet conspicuity and legibility requirements. Overhead mounting is frequently necessary to improve prominence, especially on urban freeways. Nonetheless, even a high standard of signing is unlikely to overcome any significant deficiencies in the geometric layout of an expressway.

The full requirement for interchange signing may not be required at an urban non-freeway grade separation where approach speeds are lower than for an expressway.

3.3 LEGEND SELECTION

3.3.1 Amount of legend

The maximum desirable amount of legend on any sign panel of an expressway direction sign is as follows:

- (a) *Advance exit and exit direction signs* - one route name and two destination names.
- (b) *Reassurance direction signs* - five names absolute maximum, three names desirable maximum, including route name if shown.

NOTE: Route names are always shown as black upper case legend on a white road name panel, see Clause 1.6.8(b).

3.3.2 Destinations and route names

The following requirements and recommendations apply to the selection and use of destination and route names for expressway type roads:

- (a) *Rural destinations* The name used to indicate the through or continuing direction of the expressway should be the next town etc., on a focal point map if one has been prepared, or otherwise the next town or city of importance along the route.

Exit directions should be limited to two destination names which will normally be the town or towns immediately served by the exit. If the exit is to another expressway or rural arterial road, the next focal point town, city, etc., along the branching route may be more appropriate. If there is a demand for more than two names, the THIS EXIT sign, see Clause 3.5.1 should be used.

Reassurance direction signs placed beyond interchanges shall include the through direction as above together with any important distant focal points such as any State capital, border town, regional centre, etc. towards which the freeway is headed. Directions shall be listed from the top of a sign in increasing order of distance. Significant intermediate exit destinations may also be included, subject to the legend limitations of Clause 3.6.1. It will often be helpful to strangers if the name of the next exit and its distance is given as the first line of the legend.

- (b) *Urban destinations* The name used to indicate the through or continuing direction of the route should be the focal point destination if a focal point map has been established, otherwise it should normally be for radial routes, the town or city centre in the inbound direction and a principal urban fringe centre in the outbound direction. If no significant urban fringe centre exists, the long distance destination of the route may be more appropriate.

Where exits from urban expressways serve a number of suburbs, the exit direction given on the exit signs should be confined to the name of the principal cross street or route served by the exit. Exceptions to this are:

- (i) If the exit serves one or two named centres almost exclusively, or if the exit gives direct access to the city centre, up to two names in total may be added to the sign.
- (ii) If in an urban fringe area the name of the cross street or route served is of limited significance compared with the centres being served, the rules for rural routes in Item (a) may be more appropriate.
- (iii) If the exit leads to a focal point destination shown previously on through route direction signs, that destination should be included.

The cross street name shall be repeated on the advance direction sign on the exit ramp in advance of ramp terminal. However, for orientation purposes at this point, the name of a principal suburb in each direction along the cross street should also be shown on the sign.

- (c) *Use of route names* Route names should be added to direction signs as follows:
- (i) The name of the expressway, freeway, etc. is desirably shown -
 - (A) on signs leading to the route at its start or at other principal interchanges; and
 - (B) on reassurance direction signs on the route just beyond its start, or just beyond any interchange with another expressway or a principal urban or rural arterial road.
 - (ii) The name of the intersecting route should be shown on exit signs -
 - (A) in urban areas, as indicated in sub-clause (b) above; and
 - (B) in rural areas, where the intersecting route is another expressway, a State highway, or named route of comparable importance.

3.3.3 Route numbering

Route numbers shall be selected and displayed on signs in accordance with Section 4. Examples of the positioning of route numbers on signs for expressway type roads are shown in Clauses 3.4 and 3.5.

3.3.4 Exit numbering

As an aid to expressway driving it may be desirable to number each exit in sequence along the route and to show the number on the advance signs as illustrated in Figure 3.1. Where exits are numbered the same number shall be used for all exits at the interchange. If there is more than one exit at an interchange for any one direction of travel, letters A, B ... etc., may be added to the interchange number to indicate successive exits. Legend type advance exit and exit direction signs may have the exit number added as a supplementary plate, Sign No. GE2-6 (square format) or GE2-6-Q01 (rectangular format).

Interchange exits shall be numbered sequentially from the start of the route making allowances for any known future extension to the beginning of the route or future intermediate interchanges to be built.



* The supplementary plate GE2-6 should be placed on the right hand side for a right hand exit.

FIGURE 3.1 EXIT NUMBERS ON DIRECTION SIGNS

3.4 ADVANCE EXIT AND EXIT DIRECTION SIGNS

3.4.1 Advance exit signs - legend type (GE1-5, GE1-6, GE1-13)

Examples of these signs are shown in Figure 3.2.



GE1-5
(Single destination line)

GE1-5
(Multiple destination lines)

(a) Advance exit signs at rural interchanges



GE1-5

GE1-13
(Road name only)

GE1-13
(Road name plus destination)



GE1-6

FIGURE 3.2 EXAMPLES OF ADVANCE EXIT SIGNS-LEGEND TYPE

On rural expressways, exits may be indicated by the signs GE1-5 with the legend 'EXIT 2 km' and 'EXIT 1 km'.

On urban expressways, the signs GE1-5 'EXIT 1 km' and GE1-13 are normally used, the latter located approximately 0.5 km from the exit. At higher volume exits on wider expressways where the traffic may need extra time to move safely to the left lane, earlier warning of an exit may be given by use of the signs GE1-5, 'EXIT 2 km'. At more unusual or complex locations, such as right hand exits or exits soon after multilane entry ramps, where drivers may need extra warning to weave to the correct lane, sign GE1-6 should be used instead of sign GE1-5 to show both the correct lane(s) and the distance to the exit. See also Clause 3.4.5 regarding two-lane exits and Clause 3.4.6 regarding advance signing for closely spaced exits.

At exits at isolated grade separations on non-expressway roads the LEFT LANE (GE1-13) alone or this sign preceded by an Advance Direction sign of a type specified or recommended in Clause 2.2 may be more appropriate.

The legend on Sign Nos. GE1-6 and GE1-13 shall refer to LEFT (RIGHT) LANE or 2 LEFT (RIGHT) LANES as appropriate. Signs referring to two or more lanes shall only be located where the lanes referred to are fully developed or about to be fully developed at the sign position.

3.4.2 Advance exit signs-diagrammatic type (GE1-11, GE1-12)



FIGURE 3.3 EXAMPLES OF ADVANCE EXIT SIGNS-DIAGRAMMATIC TYPE

Diagrammatic type advance exit signs may be used as an alternative to the legend type. On any one route it is desirable that one type or the other be used consistently. Examples are shown in Figure 3.3.

The layout of the GE1-11 sign should ensure that the through route number is visually separated from the exit direction names.

3.4.3 Exit direction signs and assemblies (GE2-1, GE2-2)

Examples of exit direction signs (GE2-1, GE2-2) are shown in Figure 3.4.

Signs of the type GE2-1 are suitable for side mounting at the exit ramp either at minor interchanges where there is no requirement to confirm the through direction of the expressway, or at other exits where the through direction has already been given on advance exit signs, e.g. the GE1-12 diagrammatic type. The GE2-1-2 may be used where site conditions require a narrower sign than the GE2-1-1. The GE2-1-3 sign is appropriate for long destination names.

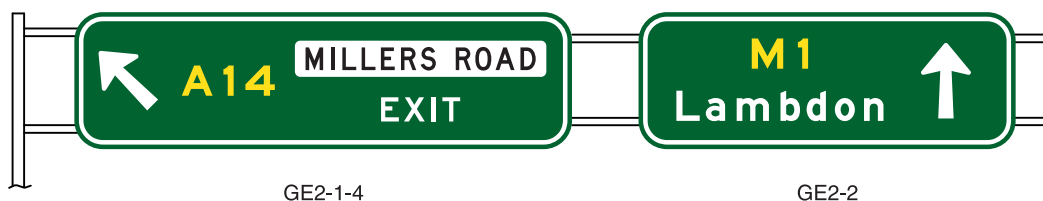
The word EXIT may be omitted from these signs if it appears on the advance exit signs, e.g. as shown in Clause 3.4.1.

If confirmation of the through direction at the beginning of the exit ramp is required an overhead assembly incorporating the through direction sign panel GE2-2 as shown in Figure 3.4 is appropriate at a single lane exit. For signs at two-lane exits and along sections of a route where there are successive exits closely spaced, see Clause 3.4.5.

Recommendations for the location of exit direction signs are given in Clause 3.4.7.



(a) Exit direction signs



(a) Exit direction assembly with through direction panel

FIGURE 3.4 EXIT DIRECTION SIGNS AND ASSEMBLY

3.4.4 Exit gore sign (GE2-3, GE2-4)



GE2-3

The EXIT sign shall be located in the exit ramp gore, 5 to 20 m past the physical nose.

The GE2-4 version is used where an exit numbering system is adopted.



GE2-4

3.4.5 Two-lane exits

The layout of signs and markings for two lane exits is illustrated in Figure 3.11. Exit signs at two-lane exits comprise the following:

- (a) First advance exit sign which is of a type illustrated in Figure 3.2, normally GE1-6, and may be side or overhead mounted. The legend 2 LEFT LANES is used if the second lane is developed at the sign location.
- (b) Second advance exit sign which comprises a gantry as illustrated below.



This sign is mounted at the beginning of the auxiliary lane, or at the point where a continuing mid-block lane is first designated as an exclusive exit or 'trap' lane. In either case this will normally be approximately 500 m in advance of the exit.

It is essential that the arrow shafts are directly above the centre of the lane to which they refer.

- (c) Exit direction sign which will normally be a sign of the type GE2-1 shown in Clause 3.4.3.

3.4.6 Closely spaced exits

Where two exits from an expressway are closely spaced, generally of the order of 1.2 km or less, it will be necessary to show combined information for both exits at or in advance of the first exit. There will only be enough space for one advance exit sign for the second exit after the first exit has been passed.

The variants of advance exit signs shown in Figure 3.5 will be needed to provide for both the advance warning of both exits prior to the first and the advance confirmation of the second exit after the first has been passed. The use of these signs is illustrated in Figure 3.12.



GE1-6

(b) Non-diagrammatic signs



GE1-12



GE1-12

(b) Diagrammatic signs

FIGURE 3.5 ADVANCE EXIT SIGNS FOR CLOSELY SPACED EXITS

3.4.7 Location of exit direction signs

As a general principle exit direction signs either side or overhead mounted should be located at the beginning of the exit ramp taper so that approaching drivers can readily identify the travel path to which the signs refer while the sign is still in their field of view.

The following situations should as nearly as practicable, adhere to this principle:

- (a) Overhead signs at closely spaced exits where the left through lane needs to be identified separately from the exit lane, i.e. to provide advance information for a second exit.

- (b) Overhead signs at two-lane exits where the function of each lane needs to be separately identified.

Consistent application of this principle will normally be practicable at rural and some urban single lane exits, possible exceptions being as follows:

- (i) Poor geometry (left curve, crest) on the immediate approach to the beginning of the taper, which may necessitate moving the exit direction sign upstream.
- (ii) Adverse location of an overpass structure just in advance of the start of taper, which must of necessity be used for the exit direction sign as it would normally impede sight distance to a sign placed at the beginning of the exit taper.
- (iii) A through carriageway lane drop just beyond the exit, where the dropped through lane needs to be separately identified from the exit lane on an overhead sign. In this case both the exit lane and the lane to be dropped need to be fully developed at the sign position.

In Cases (i) and (ii), a duplicate exit direction sign may be needed at or just beyond the start of taper.

3.5 SUPPLEMENTARY ADVANCE SIGNS

3.5.1 THIS (NEXT) EXIT(S), USE ... EXIT signs (GE1-8)

Signs in this category take one of the forms shown below. The decision to use either THIS EXIT, NEXT EXIT or USE ... EXIT should be taken as follows:

- (a) If the sign is to be located beyond the first advance exit sign for the exit the legend THIS EXIT should be used.
- (b) If the sign is to be located in advance of the first advance exit sign, the legend NEXT EXIT or USE ... EXIT should be used. If exit numbering is in place the legend USE EXIT No ... may be used instead.



GE1-8-1



GE1-8-2

The signs may be used to accommodate any additional exit direction names that are necessary but cannot be fitted into the main exit direction sign for a particular exit. They may also be appropriate to indicate access to a cross-country route to an important destination remote from the expressway corridor and which would not warrant naming on principal direction signs.



GE1-8-3

The above is an example of a sign which may be used to indicate either that there is a choice of exits to a major centre, not otherwise apparent to drivers at the first of the series of exits, or alternatively that the destination, although reached by the series of exits may not necessarily be named at each one due to other legend priorities on the respective direction signs. It should be located in advance of any of the signs for the first exit in the series.



GE1-8-1



GE1-8-2

The above are examples of signs which may be used to indicate access to major traffic generators other than named towns or suburbs, e.g. major sporting or cultural venues, universities, major recreational areas. However, their use is limited to the more important facilities e.g. ANZ Stadium. If there could be difficulty or confusion in using the THIS (NEXT) EXIT type message, an alternative legend of the type AVON DAM – USE BARGO EXIT could be considered. These signs should always be located sufficiently far in advance of exits that drivers will have sufficient time to make a decision.

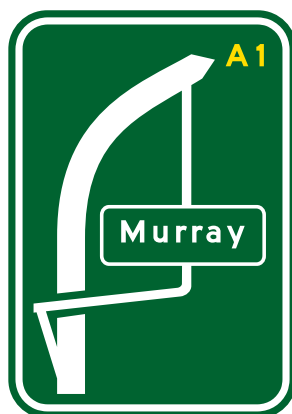


GE1-8-3

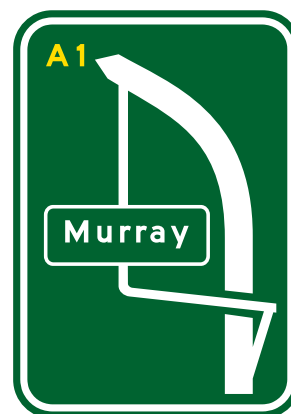
The above is an example of a sign which may be used to indicate either that there is a choice of exits to a major centre, not otherwise apparent to drivers at the first of the series of exits, or alternatively that the destination, although reached by the series of exits may not necessarily be named at each one due to other legend priorities on the respective direction signs. It should be located approximately 2 km prior to the first advance exit sign in the series. Only one supplementary advance sign is permitted on each freeway approach to an interchange. Where used, it is installed as a separate guide sign assembly.

3.5.2 By-passed town signs (GE1-15)

These signs may be used to indicate that a town by-passed by an expressway may be entered via the next exit, and the expressway later re-joined with no retracing of the access route.



GE1-15



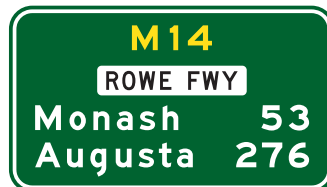
GE1-15

FIGURE 3.6 EXAMPLES OF BY-PASSED TOWN SIGNS

3.6 REASSURANCE AND INTERCHANGE SEQUENCE SIGNS

3.6.1 Reassurance direction signs (GE4-1)

These signs should normally be placed just beyond each entrance ramp to the freeway. The number of names on the sign including a route name if used, shall not exceed five and preferably should be limited to three. Where entrance ramps are closely spaced a sign beyond every ramp may be neither necessary nor practical. Legend to be shown on the sign should be selected in accordance with Clause 3.3.2. The name of the route shall be shown as a black upper case legend on a white road name panel as illustrated. If another route name is listed as a remote destination it shall be shown as upper case white legend on green background.



GE4-1

3.6.2 Interchange sequence sign (GE1-9)

This sign is appropriate in inner urban areas where interchanges are relatively close together and drivers will need additional advance notice of the order in which interchanges occur so as to prepare for the correct exit. The sign is located prior to advance exit signs for the first exit. Use of this sign does not replace the need for all signing normally required at each exit. Reassurance direction signs, (see Clause 3.6.1) should also be provided, but may be limited to every third or fourth entrance ramp. If the freeway is headed towards a single destination, e.g. the City centre, that destination may be appended to the interchange sequence sign in lieu of a separate reassurance direction sign.



GE1-9

3.7 DIRECTION SIGNS AT RAMP TERMINALS

3.7.1 Exit ramp terminals

Exit ramp terminals are normally treated in the same way as important non-expressway intersections with relevant advance direction signs from the G1 series, and intersection direction signs from the G2 series (see Section 2).

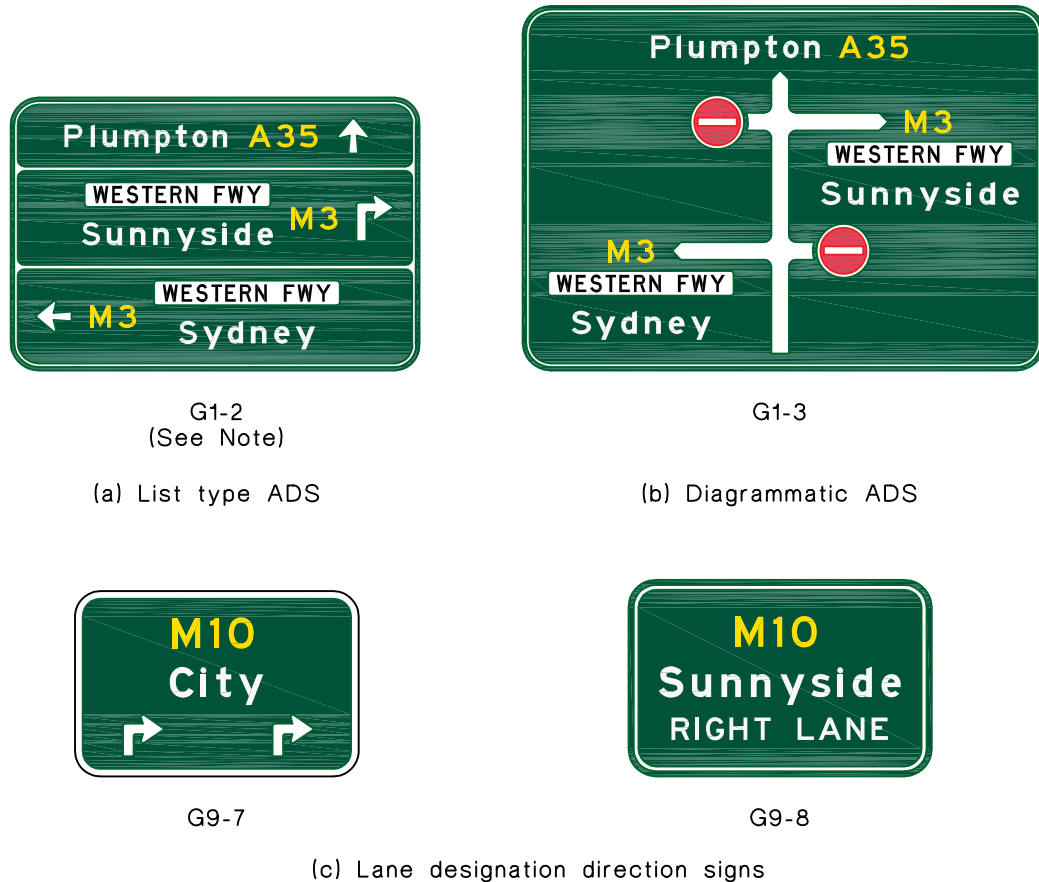
3.7.2 Approaches to entrance ramp terminals

Both advance and intersection direction signs including lane designation direction signs shall be designed and located so that in conjunction with appropriate intersection layout geometry and prohibition sign posting, wrong way entry to the expressway is minimized. This can be achieved in a number of ways including the following:

- (a) Diagrammatic signs which include the No Entry symbol on legs of the intersection which are wrong way entries.
- (b) Right angle turn arrows on list type advance direction signs to encourage the correct turn into the far entrance ramp to be taken.
- (c) Use of prominent lane designation direction signs to draw traffic into the correct positions from which correct turns into the entrance ramp are to be made.
- (d) Use of prominent intersection direction signs to identify the precise locations at which correct turns are to be made.

Examples of advance signs for ramp terminal approaches are shown in Figure 3.7.

Lane designation direction signs should only indicate the number of lanes actually available at the sign position, regardless of how many additional turning lanes may be developed downstream of the sign. Mounting overhead on a cantilever structure or on the overbridge, if any, is necessary for signs indicating lanes by means of arrows, or where there is insufficient space for side mounting, or where the width of the approach or high traffic volume would make a median mounted sign ineffective.



NOTE: The G1-2 sign should remain with three sign panels in this application. It should not be partially redesigned as a G-4 sign (see Clause 2.2.2(a)).

FIGURE 3.7 ADVANCE DIRECTION SIGNS FOR RAMP TERMINAL APPROACHES

3.8 SIGNS ON APPROACH TO AND ALONG TOLLED EXPRESSWAYS

Where there is a need to advise road users that an expressway is a toll road, this shall be indicated by use of -

- (a) the panel TOLL on direction signs; and
- (b) other specific purpose signs, if deemed necessary, to indicate the methods and details of toll payment, e.g. electronic transponder (tag), passes, cash booths, no cash, contact details.

The TOLL panel may include additional information or symbols to indicate methods of paying the toll.

NOTE: It is envisaged that in time, the word TOLL alone on the panel will have a universal meaning across Australia simply indicating that a toll must be paid. Authorities are encouraged to work towards this in the case of existing toll roads or adopt this meaning in the case of new toll roads.

Advice to road users on the above direction signs -

- (i) shall be provided on an untolled road leading directly into the start of a tolled expressway where it will alert road users in sufficient time of their option of leaving before the tolled section commences;
- (ii) shall be provided on connecting roads in advance of and at entry ramps to the expressway; and

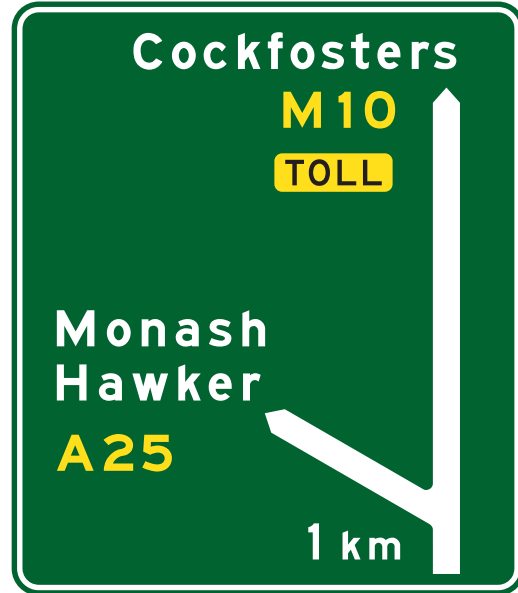
(iii) may be provided as part of the through direction information on advance exit and exit direction signs along the tolled section as needed to advise road users that there may be further toll collection points on the through road.

The TOLL panel shall be located in a position on each direction sign which makes it clear which route or routes are tolled and which are not.

Examples of direction signs incorporating the TOLL panel are shown in Figure 3.8.



GE2-2



GE1-12

FIGURE 3.8 TYPICAL APPLICATION OF TOLL SIGN PANELS

3.9 TYPICAL DIRECTION SIGN TREATMENT

Typical direction sign treatments at exits on expressway type roads are shown in Figures 3.9 to 3.13.

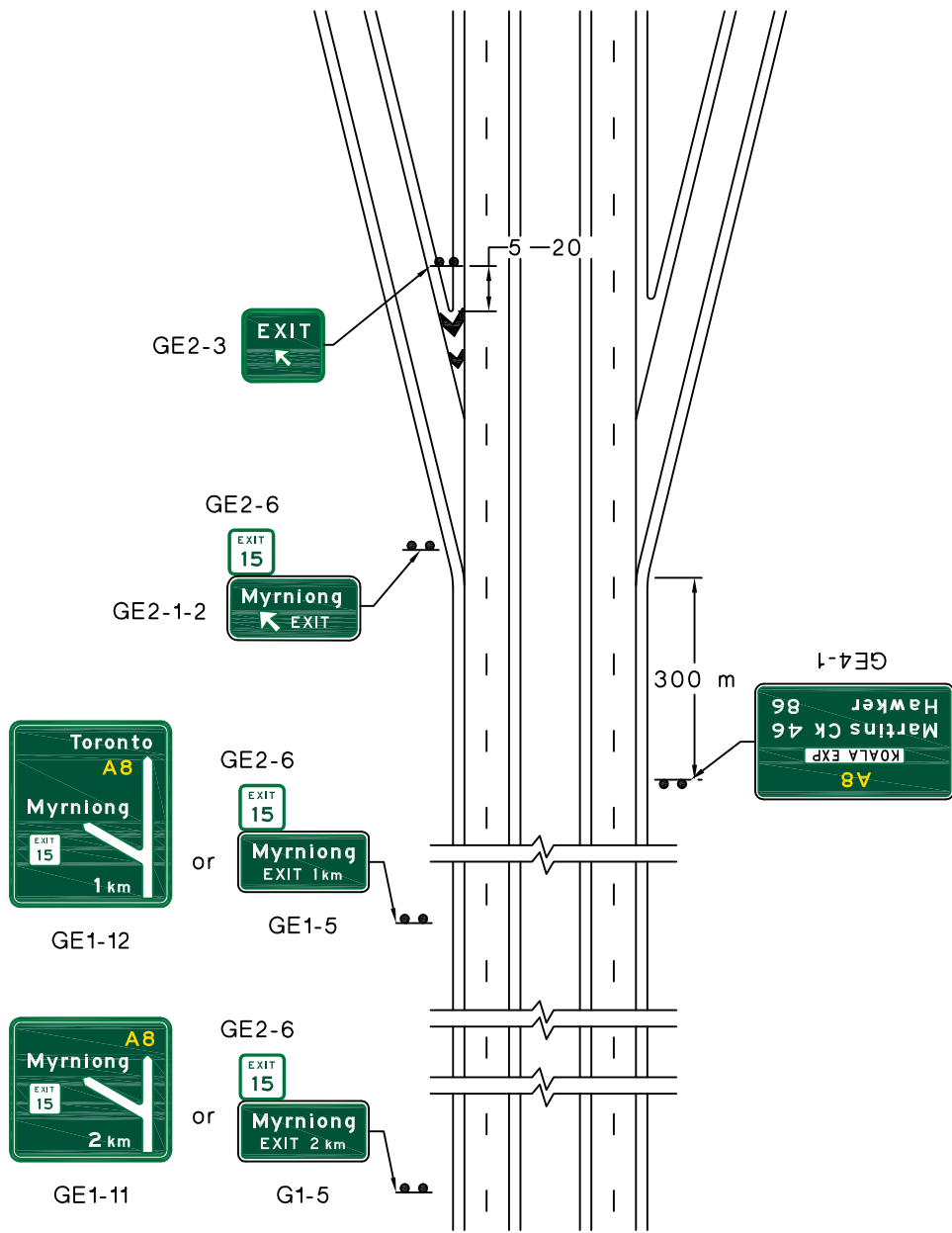
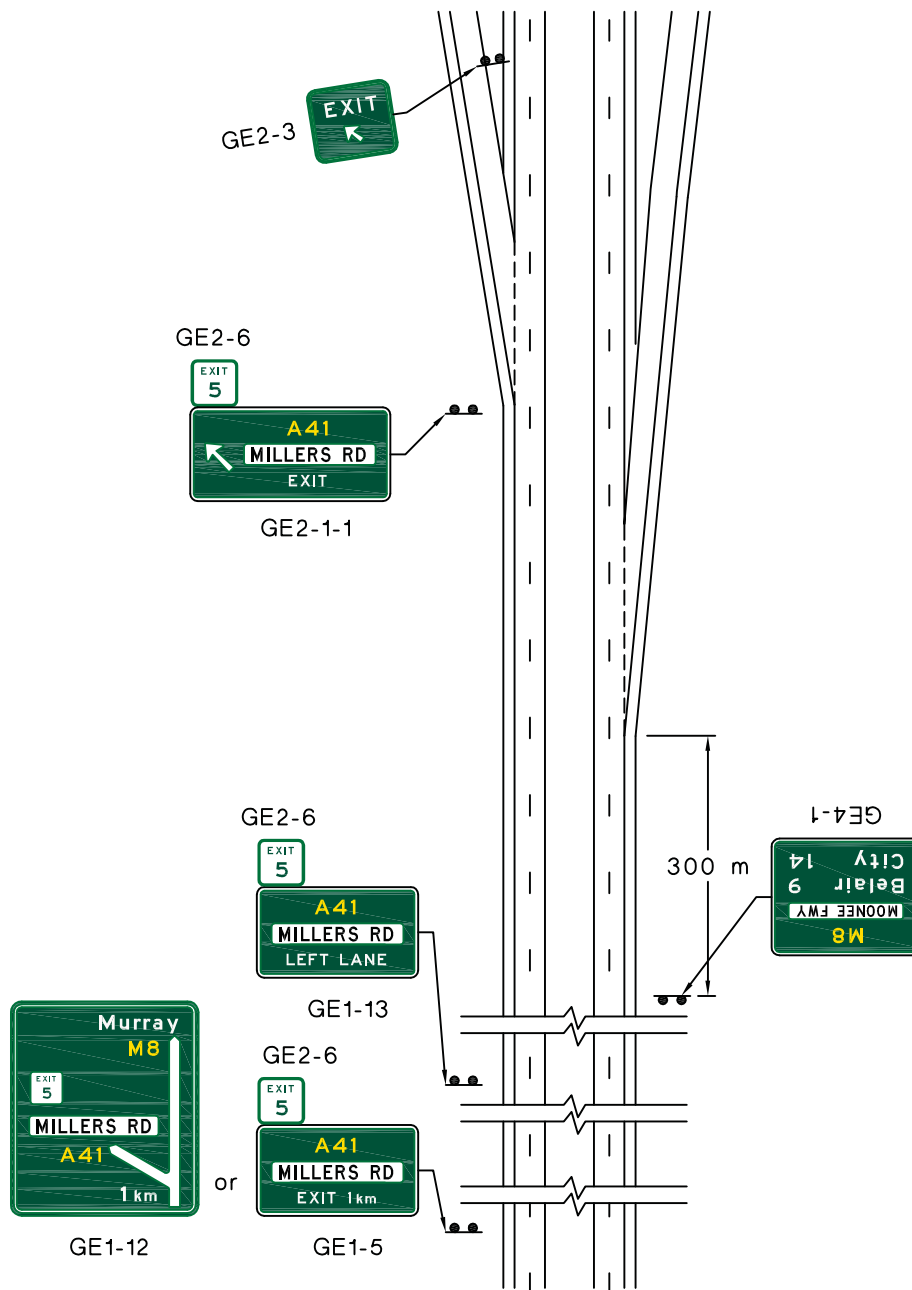


FIGURE 3.9 EXAMPLE OF SIGNS AT AN EXIT AND ENTRY ON RURAL EXPRESSWAY



NOTE: Sign No. GE2-1-1 and where used, Signs Nos. GE1-5 should be mounted overhead where visibility to the sign may be restricted, for example:

- (a) On a wide roadway with 3 or more lanes and significant commercial vehicle traffic.
- (b) Where the exit is part way around a left curve or just beyond a crest.

FIGURE 3.10 EXAMPLE OF SIGNS AT A SINGLE LANE EXIT AND ENTRY ON AN URBAN EXPRESSWAY

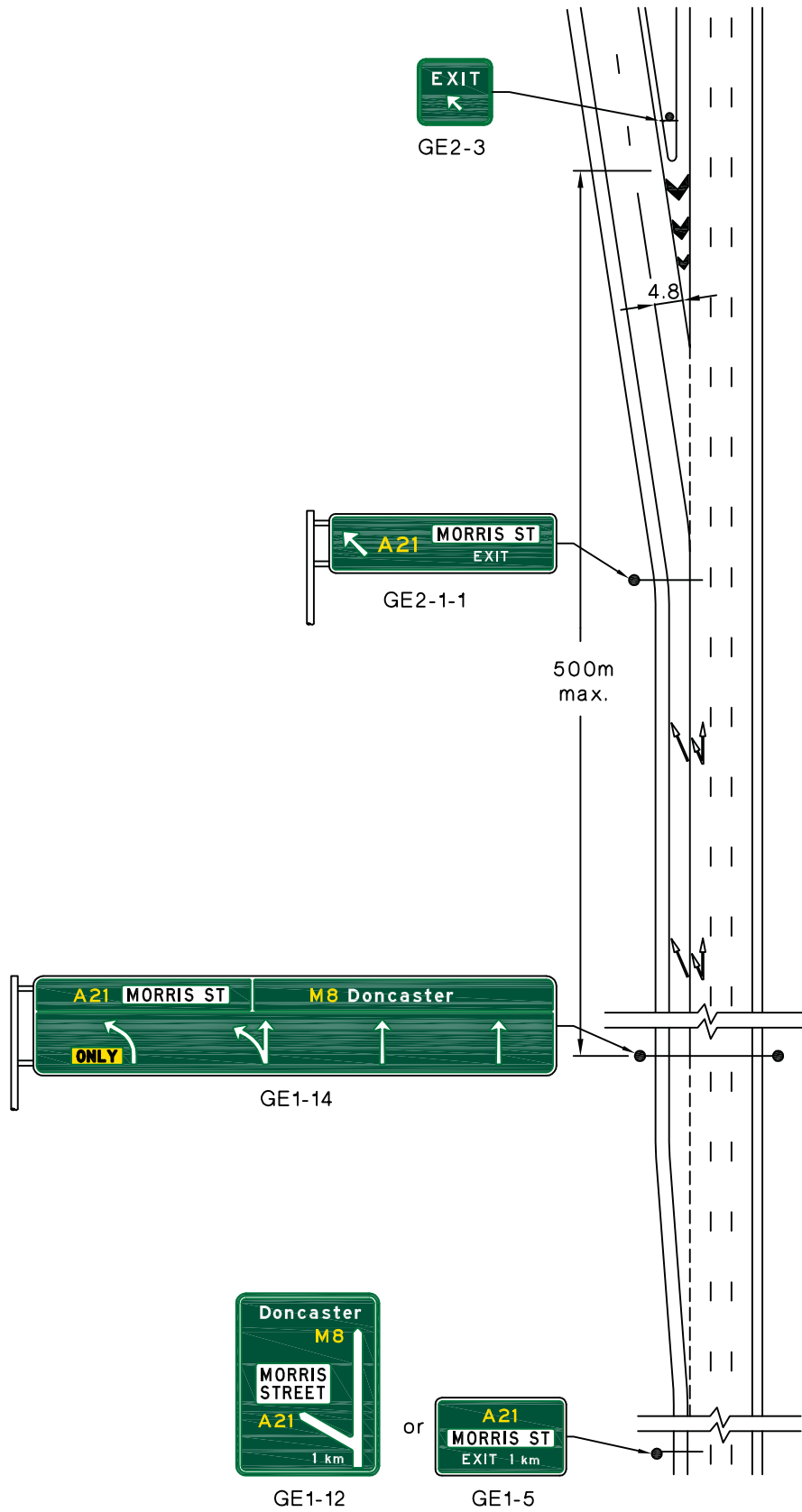
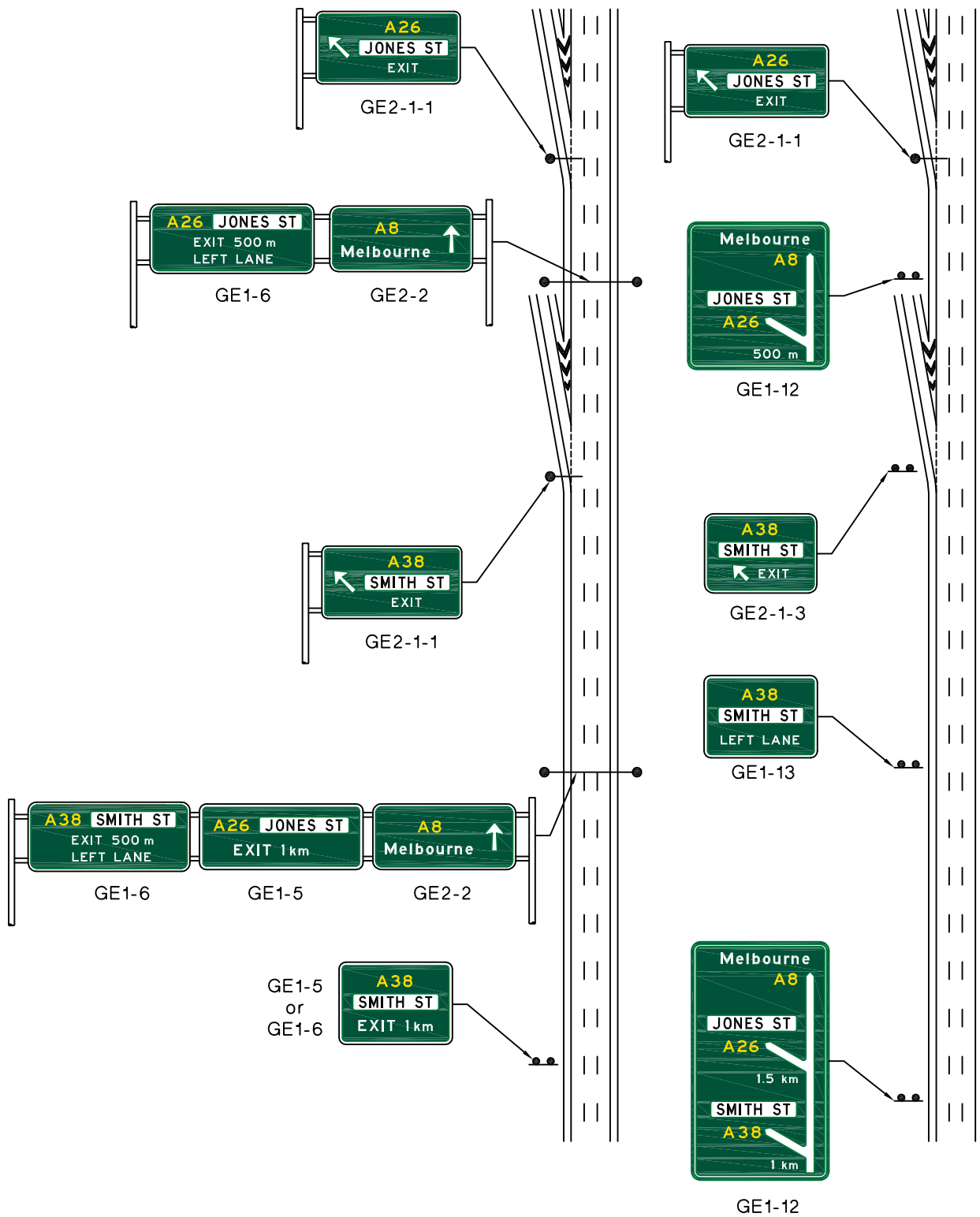


FIGURE 3.11 EXAMPLE OF SIGNS AT TWO-LANE EXIT FROM AN URBAN EXPRESSWAY



(a) Non-diagrammatic signs

(b) Diagrammatic signs

NOTES:

- 1 Overhead Exit Direction signs should be provided where the prominence of a side mount sign would not be adequate, e.g. on a left hand curve, just beyond a crest or on a three or four lane roadway with significant commercial vehicle traffic.
- 2 EXIT gore signs, GE2-3, are required but not shown on this drawing.

FIGURE 3.12 EXAMPLES OF SIGNS AT CLOSELY SPACED EXITS 1.2 km OR LESS

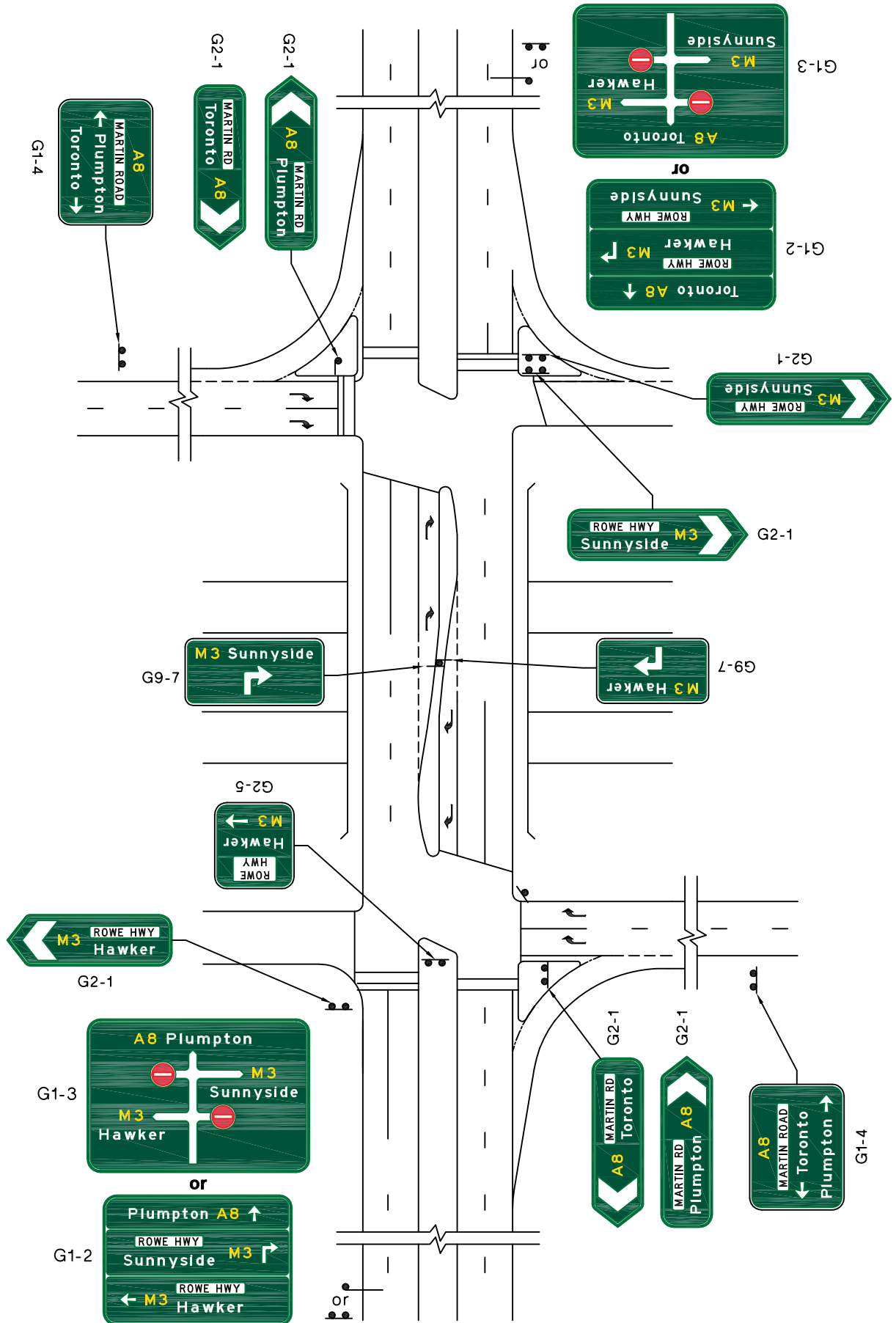


FIGURE 3.13 EXAMPLE OF SIGNS AT APPROACHES TO RAMP TERMINALS

SECTION 4. ROUTE NUMBERING

4.1 GENERAL PRINCIPLES

Route numbering supplements direction signing as an additional aid to navigation by assigning numbers to roads which have significance as 'through' routes. The following requirements and recommendations apply to route numbering systems:

- (a) The route shall be numbered throughout without any gaps in the continuity of the numbering and should be consistently maintained in this condition.
- (b) The number shall be appropriately positioned and displayed sufficiently frequently that road users unfamiliar with the route will be both adequately directed and adequately reassured throughout their journey that they are still following the route.
- (c) Numbers shall be unique to a route and steps shall be taken to have them shown on road maps easily available to the public.
- (d) Once numbered routes are established there should be as few alterations as possible either to the course or the assigned number of any route so that maps in the public's possession do not become outdated.
- (e) Route numbers should in general be shown on direction signs except for certain applications for free standing route markers as set out in Clause 4.4.3.

4.2 TYPES OF ROUTE NUMBERING

4.2.1 The alphanumeric system

This system is based on a code comprising a letter in the Series, A, B, C or M indicating the relative importance of the function of the road and a number applying to the specific route. Further description and application of the system is given in Clause 4.3.

NOTE: The use of shields for general purpose route numbering including National Routes and National Highways is no longer specified in this Manual. Recommendations for interim maintenance of existing shield based systems pending their phase-out are given in Clause 4.2.5.

4.2.2 Tourist routes

The marking and numbering of tourist routes and drives is specified in Part 6 of this Manual. Route marker shields are used in this application.

4.2.3 Overdimensional load routes

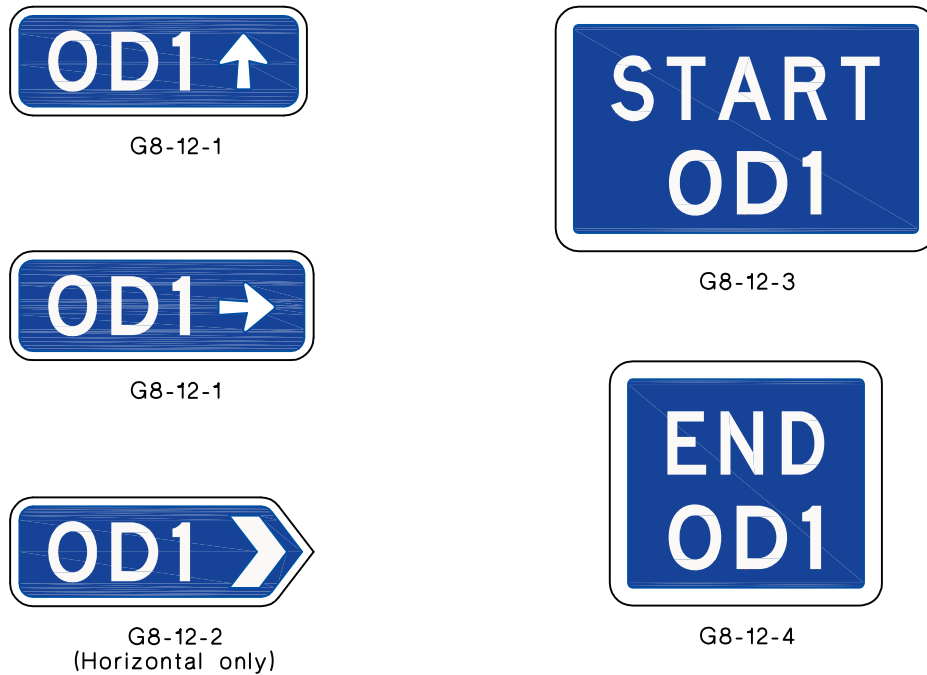
Overdimensional load (OD) routes where marked shall have free standing route markers comprising a rectangular board with an internal arrow which may be horizontal, vertical or angled or a chevron ended board for horizontal directions only, see Figure 4.1. The legend shall comprise the letters OD and if required, a number. Signs are normally black legend on white ground but may be colour coded using one or more of the sign colour combinations shown in Table 4.1. START and END signs are also illustrated in Figure 4.1.

Any OD route number used shall not conflict with any nearby A, B, C, M route number.

TABLE 4.1 SIGN COLOUR COMBINATIONS FOR OD ROUTE SIGNS

Legend colour	Background colour
White or yellow	Blue Standard green Brown Black
Black	White Yellow Orange Light green

NOTE: Red backgrounds should not be used in this application.



NOTE: Signs with light coloured background have a background colour edge strip outside the black border.

FIGURE 4.1 TYPICAL OD ROUTE SIGNS

4.2.4 Special routes using symbols

Where a route is to be marked as a special purpose route (e.g. a ring route) using a symbol, it shall be used on signs in the same way and in the same positions as alphanumeric route numbers. Where all or part of such a route is also part of a conventionally marked alphanumeric route, dual numbering may be required.

4.2.5 Maintaining existing shield based systems

Where it is desired to continue maintaining an existing shield based system other than those covered in Clauses 4.2.2 and 4.2.4, the following practice is recommended:

- (a) Use of free-standing markers should be phased out with additional markers incorporated into direction signs to fill any gaps in the continuity of the marked route which might result.
- (b) Route markers on direction signs should continue to be located in the same position on each sign as the alphanumeric number. Numerals should continue to be not less than 0.75 times the capital letter height of the destination name to which the number refers.
- (c) In the design of new direction signs, provision should not only be made to accommodate the shield, but space should be available on the signboard to allow subsequent change to an alphanumeric number.

4.3 THE ALPHANUMERIC SYSTEM-DESCRIPTION AND USE

4.3.1 Route classification

For the purpose of route numbering, routes shall be classified by the function they perform. Except for the distinction made for the numbering of freeways and motorways under certain conditions, a route's classification shall be independent of its standard of construction. Requirements and recommendations for the assignment of route classifications are as follows:

(a) *A Routes*

Except as permitted in Item (d), the principal arterial routes in urban areas and connecting routes between cities and towns of key regional significance in rural areas shall be marked as A Routes.

(b) *B Routes*

Routes which may be marked as B Routes are as follows:

- (i) Routes alternative to A Routes, connecting cities and towns of key regional significance but which may not be preferred by road users wishing to make the connection in the most efficient manner. They would typically be longer than the A Route and perhaps connect with an alternative group of lesser towns along the way.
 - (ii) Routes connecting towns of lesser significance to key regional centres without necessarily being through routes in a regional sense.
 - (iii) Arterial roads in urban areas not meeting the requirements for an A Route.
- (c) *C Routes*
- This classification may be used for roads of lesser significance than A or B Routes but on which route numbering will assist road user navigation.
- (d) *M Routes*
- This classification may be substituted for the A Route classification for urban roads of freeway or motorway standard and for rural roads predominantly to freeway standard which extend continuously from the urban area of a major city.

4.3.2 Number selection

The following requirements and recommendations apply to the selection of route numbers.

- (a) An A Route proceeding from an M Route shall retain the same number, with the point of change treated as in Clause 4.4.4(c). In all other cases a unique set of numbers shall be reserved for each of A, B and C Routes.
- (b) Each route classification letter, except for changes between M and A, shall be used without change throughout the length of each numbered route.
- (c) Routes which are continuous across State borders should retain both the classification and number across the border. This may require consultation between jurisdictions.
- (d) Where identical numbers are to be used in adjacent states on different routes, those routes should be geographically remote from one another.

4.3.3 Alternative and by-pass routes

Where a town or city has been by-passed, the continuing route number and classification shall be applied to the by-pass. The alternative route through the town may be classified at either the same or a lower level but shall not use the same number. Consideration should be given however, to using an associated number, e.g. if the through route were A31, the alternative route through the town could be numbered A831 or B831, or A311 or B311.

Different numbers would need to be found for different town routes along the one numbered through route.

4.3.4 Dual numbering

Where two numbered routes join and later separate some distance along a common route, the common route should in general be dual numbered. An exception would be where the common route would be so long that any point in trying to maintain continuity of one of the routes is lost, i.e. it would be more appropriate to restart it as a freshly numbered route.

Dual numbering of an A Route along part of an M Route should be avoided as this could lead to confusion among drivers unfamiliar with the route as to the status of the route on which they are travelling.

4.4 DISPLAY OF NUMBERS

4.4.1 Form of display and visual prominence

Route numbers shall comprise yellow capital letters and numerals equal to or greater than the height of initial capital letters used for the principal destination or route names on the sign. On direction signs other than those in the G3 series, Series E letters and numerals shall be used. On G3 signs Series D shall be used as a minimum, with series E recommended wherever practicable. The route number shall be displayed without any shield or other enclosure.

The route number shall comprise retroreflective material with a luminance contrast ratio between legend and background of at least 6 to 1 when observed under both daylight and retroreflected light at normal viewing angles.

NOTE: Combination fluorescent/retroreflective yellow material may be needed to meet this requirement.

Dual numbers (see Clause 4.3.4) shall be displayed with a white oblique stroke separating the numbers as illustrated.

A79 / A300

4.4.2 Display on direction signs

In general, route numbers should be displayed on direction signs to provide best visual balance having regard to the shape of the signboard or sign panel and the word lengths of other text on the sign or sign panel. Detailed requirements for common sign types are as follows:

- (a) On a wide format non-diagrammatic advance direction sign panel, as follows:
 - (i) Above destination name(s), or beside on same side as arrow for most economical use of signboard having regard to shape of adjacent sign panel(s), see Figure 4.2(a).
 - (ii) Above or to the left of the route name, if any, for best visual balance, see Figure 4.2(c) and (d).
 - (iii) Not immediately above an arrow, see Figure 4.2(c).

NOTE: The requirement in Item (iii) is designed to avoid the route number appearing to be exclusively associated with the arrow.

- (b) On a narrow format advance direction sign, beside the arrow in all cases, above the destination/route legend for straight and angled upwards arrows, below for horizontal arrows, see Figure 4.2(b).
- (c) On intersection direction signs, all categories, as specified in Clause 2.4.7.
- (d) On reassurance direction signs, above the list of names, or above or to the left of the route name according to best visual balance and economical use of signboard space, see Figure 4.2(h).
- (e) On diagrammatic signs the route number should be located for best clarity and visual balance with the route number for each of the directions located consistently with respect to the destination name. The preferred location is above the name, see Figure 4.2(e), (f) and (g).

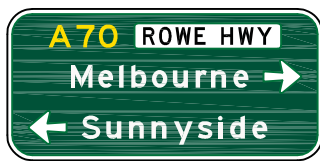
Examples of advance and reassurance direction signs are shown in Figure 4.2. Examples of intersection direction signs are shown in Clause 2.4.7. The principles should be adapted as appropriate to other direction sign types.



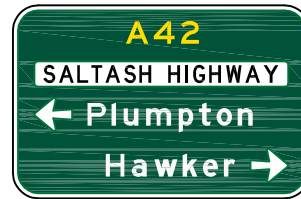
(a) On a wide list type ADS, e.g. Sign Nos G1-1, G1-2



(b) On a narrow format list type ADS, e.g. Sign No. G1-6



(c) On a G1-4 type sign or sign panel. Route number cannot be immediately above an arrow (see Clause 4.4.2(a)(iii))



(d) On a G1-4 sign where number needs to be at top of sign (see Clause 4.4.2(a)(iii))



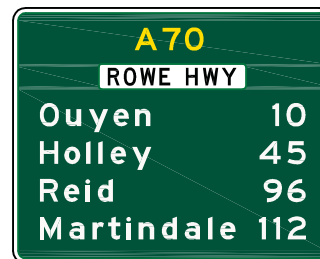
(e) On a G1-3 type diagrammatic ADS



(f) On a G1-5 type diagrammatic ADS



(g) On a G1-7 expressway exit diagrammatic sign



(h) On a G4-1 reassurance direction sign

FIGURE 4.2 EXAMPLES OF ROUTE NUMBERS ON ADVANCE AND REASSURANCE DIRECTION SIGNS

4.4.3 Display as free standing markers or supplementary plates

Signs used as free standing markers or supplementary plates are listed in Table 4.2 and used as shown below.

TABLE 4.2 FREE STANDING ROUTE NUMBER MARKERS AND SUPPLEMENTARY PLATES

Sign	Sign number	Size, mm
END (route)	G8-10-1A G8-10-1B	750 × 600 1000 × 800
END (route), supplementary plate	G8-10-2	Legend size to match principal legend size on parent sign
Route number change (END route/START route)	G8-10-3A G8-10-3B	750 × 1200 1000 × 1600
Guidance marker -free standing	G8-11-1	Vertical or angle arrow - 600 × 450 Horizontal arrow - 600 × 425
Reassurance markers -free standing	G8-11-2	600 × 300

(a) *Guidance and reassurance markers (G8-11-1, G8-11-2)*

Use of guidance and reassurance markers should be limited to the following:

- (i) Guidance markers in urban areas to provide continuity of a route through a network of streets at those locations where there are no direction signs incorporating the numbers.
- (ii) Reassurance markers-
 - (A) just outside a town or city, facing departing traffic;
 - (B) beyond an intersection with another numbered route;
 - (C) beyond an intersection where the numbered route turns;

unless in each case, a reassurance direction sign has been used.

Free standing guidance markers, G8-11-1, shall have an arrow above the number which may be vertically upwards, angled or horizontal. Reassurance markers, G8-11-2, do not have an arrow. The markers are illustrated in Figure 4.3.



FIGURE 4.3 FREE STANDING GUIDANCE AND REASSURANCE MARKERS

(b) *End and number change signs*

The following signs shall be used to indicate the termination of a numbered route or a change in the numbering:

(i) *END (route) (free standing sign), G8-10-1*

END (route), (supplementary plate), G8-10-2



G8-10-1

The END (route) sign may be required where a route number terminates and no dual number continues past that point. The freestanding marker, G8-10-1, should be placed 100 to 400 m in advance of the intersection at which the route terminates, and where there is no advance direction sign. The supplementary plate, G8-10-2, should be mounted under the advance direction sign where provided.



G8-10-2

(ii) *(Route) number change, G8-10-3*



G8-10-3

The (Route) Number Change sign shall be used at locations where an M Route changes to an A Route or vice versa without a change in the numeral(s). Ideally it should be located remote from an intersection, but if this is not practicable it should be located 100 to 400 m in advance of an intersection.

SECTION 5. GENERAL INFORMATION SIGNS

5.1 GEOGRAPHICAL FEATURE SIGNS (G6)

5.1.1 Purpose

These signs convey to motorists general information of interest, such as the names of towns, rivers, streams or forests, and other information useful to a traveller.

5.1.2 Location

The signs should be located on the left side of the road in association with the feature to which they refer, and should be placed where they are seen clearly by an approaching driver, but without detracting from essential direction, warning or regulatory signs.

5.1.3 Shape and colour

Information signs shall be rectangular in shape with the long axis horizontal. They shall have a black legend on a white reflectorized background, except for tourist signs which are described in Part 6 of this Manual.

5.1.4 Legend

Legend should be Series D or E capitals although Series C is permissible for long words. The legend size varies considerably according to the message, but the principal legend should not be smaller than 140 mm for any sign located to face approaching traffic. For signs erected with the face parallel to the road centre-line, such as Local Government Boundary signs, legend smaller than 140 mm may be used.

5.1.5 Types of signs

The various types of information signs are given in Table 5.1.

Sign type	Sign number
Town Name	G6-1
Stream Name	G6-2
State Border	G6-3
State Border	G6-4
Local Government Boundary	G6-5
Feature	G6-6

The size of these signs depends upon the size of letter used. Recommended letter sizes for each type are given in the following Clauses.

5.1.6 Town Name (G6-1)



Town Name signs showing the name of a town, village or suburb of a city should be erected on the left side of the road at the entrance to the town or at the boundary between city suburbs. In small villages the signs may be erected in the centre of the village.

The size of letters should not be less than 160 mm. For short names, and on roads with two or more lanes in one direction, the size should be increased. Letter sizes up to 240 mm may be used in these cases.

5.1.7 Stream Name (G6-2)



G6-2

Stream Name signs showing the names of rivers, streams or creeks, when used, should be located on the left side of the road near to the stream and outside any protective fencing. The letter size should be not less than 140 mm.

Where a bridge over a river, stream or creek has an approved name, the bridge name may be shown below the stream name. In such cases an increase in the letter size for the stream name may be desirable, with the bridge name in letters 40 mm smaller.

5.1.8 State Border (G6-3)



G6-3

STATE BORDER signs (G6-3) should be erected on the left side of a road to face traffic passing from one State into another. The minimum letter sizes should be 80 mm for 'STATE BORDER' and 180 mm for the name of the State being entered.

5.1.9 Local Government Boundary (G6-5)



G6-5

Local Government Boundary signs should be erected parallel to the centre-line of the road at the boundary between two local government areas. The names of the councils should be placed one on each half of the appropriate side of the board. Because the signs are not erected to face approaching motorists, the minimum letter size may be 80 mm.

NOTE: Road authorities may permit alternative designs to be used in lieu of Sign No. G6-5.

5.1.10 Feature (G6-6)



G6-6

Feature signs may be erected to mark the approximate location of important geographical features which would be of interest to passing motorists.

The location of the signs will depend on circumstances but they should face approaching motorists and the minimum letter size should be 140 mm.

5.2 KILOMETRE POSTS

5.2.1 General

Kilometre markers may be used on arterial roads both urban and rural, to indicate distances to and from important towns and cities. They are normally installed on a 'point-to-point' basis whereby for travel in each direction the driver encounters reducing distances to the selected datum town or other datum point on successive markers until that datum is reached. Although the markers are provided primarily for the benefit of road users, they may also provide an important administrative reference for the specification of road locations by road or other service authorities, or for emergencies.

5.2.2 Kilometre plates (G10-3, G10-4, G10-5)



The kilometre plate, G10-3, shall comprise a trapezoidal, standard green plate with white reflectorized legend not smaller than 140 mm in Series C, D and E depending on the number of letters or numerals in the legend.

The distance shall be shown in kilometres measured to the approximate centre of the datum town to which they refer. The datum town shall be a town shown on reassurance direction signs. The initial letter of the datum town shall be used except as provided below.

Where another town on the route has the same initial letter and there could be confusion as to which town the marker refers, two letters may be used. If the initial letter is M, A, B or C, the first and second letter of the name should be used to avoid confusion with route numbers.

On routes identified as National routes, G10-4 supplementary plate may be mounted below the sign or alternatively the sign G10-5 may be used.

5.2.3 Location and Spacing

Kilometre markers should be displayed at not more than 10 km intervals along any marked route. This spacing should be reduced on high volume routes.

On undivided roads the markers should normally be erected as double-sided signs on the left side of the carriageway when proceeding away from the capital city or coast, or where neither of these reference points is applicable, on the left side when proceeding from east to west or from south to north.

On divided roads the markers should be erected as single-sided signs on the left side of each carriageway.

Only one marker should be displayed on each post for any one direction of travel unless a route splits into two marked routes a short distance beyond a datum town, in which case markers for both routes may be shown for the appropriate direction of travel over the length common to both routes.

5.3 NON-STANDARD INFORMATION SIGNS

5.3.1 General

Non-standard information signs comprise signs having a specialized legend appropriate to either a unique local purpose or a message so relatively rarely repeated that standardization of a sign or series of signs is not warranted.

Such signs should not be used where a standard sign will fit the purpose.

5.3.2 Sign design

Requirements and recommendations for the design of non-standard signs are as follows:

(a) *Length of message*

Signs to be read by drivers of moving vehicle shall be limited to a length which can be comfortably read at the prevailing approach speed. Guidance on required letter sizes for signs is given in Appendix D in Part 2 of this Manual. The letter size required will be dictated by the length of the message. Messages that are too long will require letter sizes and hence signboard sizes that become inordinately large. Non-standard symbols shall not be used unless their design conforms and their comprehension has been tested to AS 2342.

(b) *Message type*

Non-standard information signs shall be confined to warning messages, driving instructions or route information. Information of a commercial nature shall be confined to tourist and services signs as specified in Part 6 of this Manual.

(c) *Colour of signs*

Colours of non-standard information signs should conform to the following:

- (i) General information - black, blue or green legend on white background,
- (ii) Lengthy text warning and driving instruction signs - see Part 2 of this Manual.
- (iii) Route information:
 - (A) Directional information (e.g. alternative route information) - white legend on standard green background.
 - (B) Controls or advice on route usage - black legend on white background.
- (iv) Tourist and services information - white legend on brown or blue background as specified in Part 6 of this Manual.

5.3.3 Sign location

Non-standard information signs shall be located such that they do not distract drivers approaching points of hazard or warning signs and devices relating to those hazards. They shall not be located close to intersections or other points of conflict, or in positions where they may obscure or detract from related direction signs.

APPENDIX A

GUIDELINES FOR THE LAYOUT OF LEGEND ELEMENTS ON DIRECTION SIGNS

A1 GENERAL

The purpose of this Appendix is to provide guidance on the design and layout of direction signs.

Layout design is developed at two levels. Firstly the type of sign (i.e. the sign number) and any permitted variants under that number will dictate the general form of the sign. This can be ascertained from either the illustrations in this Standard or the examples of direction signs given in AS 1743.

The second level entails the development of a layout which observes rules of positioning and spacing of legend elements, and at the same time achieves a pleasing appearance and visual balance.

Common faults in the design of direction signs include:

- (a) Signboard and legend too small to be read properly at the prevailing traffic speed.
- (b) Legend too excessive to be read at prevailing traffic speed.
- (c) Legend elements bunched up vertically or horizontally, or both, making the sign difficult to read.
- (d) Legend not sufficiently clearly associated with the correct directional arrows or points on a diagrammatic sign.

A2 SELECTION OF LEGEND ELEMENTS

Legend elements may be selected as follows:

- (a) *Letters and numerals* - Forms of letters and numerals together with spacing tables are given in AS 1744. Letter heights for principal legend can be determined from Appendix A but Tables 1.1 and 1.2 in Section 1 of the Standard give recommended minimum sizes for principal and other legend elements for signs of standard legend content (i.e. generally up to six elements, including destination names, route names and route numbers).
- (b) *Sign arrows* - Recommendations for standard, long and extended arrow designs are given in AS 1743. Recommended widths across arrow barbs related to height of principal legend are also given.
- (c) *Diagrams* - Suitable designs and stroke widths for diagrams on diagrammatic direction signs can be designed by reference to the examples given in AS 1743. Particular note should be taken of the boldness required of the diagram as it relates to legend size and of the signboard space required to position legend around elements of the diagram for satisfactory readability.
- (d) *Borders, edge strips and corners* - Requirements and guidance on these are given in AS 1743. Internal dividing lines are equal in width to the border where there is an edge strip, and to 75% of the width of the border where there is no edge strip.

A3 SPACING OF LEGEND ELEMENTS

The following guides for the spacing of legend elements should be used in conjunction with Paragraph A4, Achieving visual balance:

- (a) Vertical spacing between lines of legend:
 - (i) Upper case legend - 0.5 times letter height minimum
- 0.75 times letter height desirable
 - (ii) Lower case legend - 0.5 times capital letter height minimum.
- 0.75 times capital letter height desirable or when there are descenders in the upper line

If the lines are of different letter height the factor applies to the larger of the two.

- (b) Vertical spacing to a border:
 - (i) Line of legend or route number-as for Item (a).
 - (ii) Road name panel-1.5 times width of border plus edge strip (if any), measured from edge of panel, not internal legend.

- (c) Horizontal spacing between any two sign elements other than spacings between words in the one name or phrase-0.75 times principal legend capital height. (Inter-word spacings are given in AS 1744).
- (d) Legend to edge of sign if sign has no border including road name panels:
 - (i) Horizontal-0.5 times legend height.
 - (ii) Vertical-0.25 times legend height.
- (e) Road name panel to any element-measure clearance from edge of panel, not the internal legend.
- (f) Vertical spacing between groups of destinations in a GI-4 type sign or sign panel-at least twice the spacing of lines within the group.

A4 ACHIEVING VISUAL BALANCE

Even if all the design rules are adhered to, a measure of artistic endeavour may be needed to give the sign a good appearance and visual balance. Adjust the balance of the design if necessary by proceeding in one or more of the following ways:

- (a) Lists of names in vertical format will usually be centred on one another and the panel sign. If not satisfactory, try-
 - (i) moving the centre of the list off-centre with the sign panel; or
 - (ii) left or right justifying the list. (This may be desirable to give the sign some directional enhancement.)
- (b) If there are two lists side by side, e.g. as on a reassurance direction sign, left justify the left hand list and right justify the right hand list.
- (c) If a particular line of legend is so long compared with others that it extends the signboard width unreasonably, try breaking it into two lines.
- (d) Never cramp legend by slavish observance of minimum clearances, but likewise, try to avoid large areas of blank sign panel, particularly blank areas not symmetrically disposed across the panel-unless a directional enhancement is being sought.
- (e) If a sign panel is unusually large, e.g. because it contains several lines of legend, try making elements such as arrows, route numbers and symbols larger than accompanying principal legend would require.
- (f) In the design of a diagrammatic sign there needs to be adequate spatial separation between the groups of information labelling each directional element of the diagram so that it is clear at a glance what information applies to each element.

APPENDIX B

INSTALLATION AND LOCATION OF SIGNS

B1 SCOPE

General principles for uniform installation and location of signs and guidance on the mounting angles required to ensure maximum effectiveness of signs are specified in Clause 1.12 in Part 1 of this Manual.

B2 SIGN LOCATION - ROADSIDE SIGNS

B2.1 General

Direction signs should normally be erected on the left side of the carriageway. On roads other than expressway type roads they may be placed in the median of a divided road if this would provide better prominence or visibility for the sign.

Care is needed in locating signs to ensure that they do not obscure one another or otherwise generally obscure visibility, particularly at intersections.

At channelized intersections some guide signs need to be erected on traffic islands or on the right side of some carriageways. They should, if practicable, be within a driver's normal line of vision as he/she approaches the intersection, or, if this cannot be achieved, should be on the side of the intersection where the driver is likely to be looking if he/she is required to execute a turn. However, the signs should not obscure a driver's vision of traffic approaching along a conflicting path or of other road users, e.g. pedestrians.

Very large roadside signs may require special consideration, while special circumstances of road layout and the adjacent topography may also warrant departures from the requirements given.

B2.2 Longitudinal placement

General principles for longitudinal placement of guide signs are specified in Clause 1.12.2 in Part 1 of the Manual.

For guide signs on expressways and other high-speed roads considerably greater distance may be required.

B2.3 Lateral placement and height

B2.3.1 General

General principles for lateral placement of guide signs are specified in Clause 1.12.3 in Part 1 of the Manual.

B2.3.2 Lateral placement - rural

The clearance to guide signs shall not be less than 2 m from the edge of the travelled way.

B2.3.3 Lateral placement - urban

On kerbed roads in urban areas guide signs shall be located back from the face of the kerb not less than 300 mm. Where mountable or semi-mountable kerbs are used, e.g. on traffic islands, the minimum clearance should be 500 mm. On urban roads which are unkerbed, or on expressway type roads, the distances given in Paragraph B2.3.2 shall be used.

NOTE: Large signs may require overhead mounting if these lateral clearances cannot be achieved.

B2.3.4 Height - rural

In rural areas roadside signs shall be mounted clear of roadside vegetation and be clearly visible under headlight illumination at night. The height of the sign should normally be not less than 1.5 m above the nearest edge of travelled way. For Finger boards and intersection direction signs, the height should be increased to 2 m. The maximum height above nearest edge of travelled way shall be 2.5 m for signs up to 3 m² in area and 3.5 m for larger signs.

B2.3.5 Height - urban

General principles apply.

B3 SIGN LOCATION - OVERHEAD SIGNS

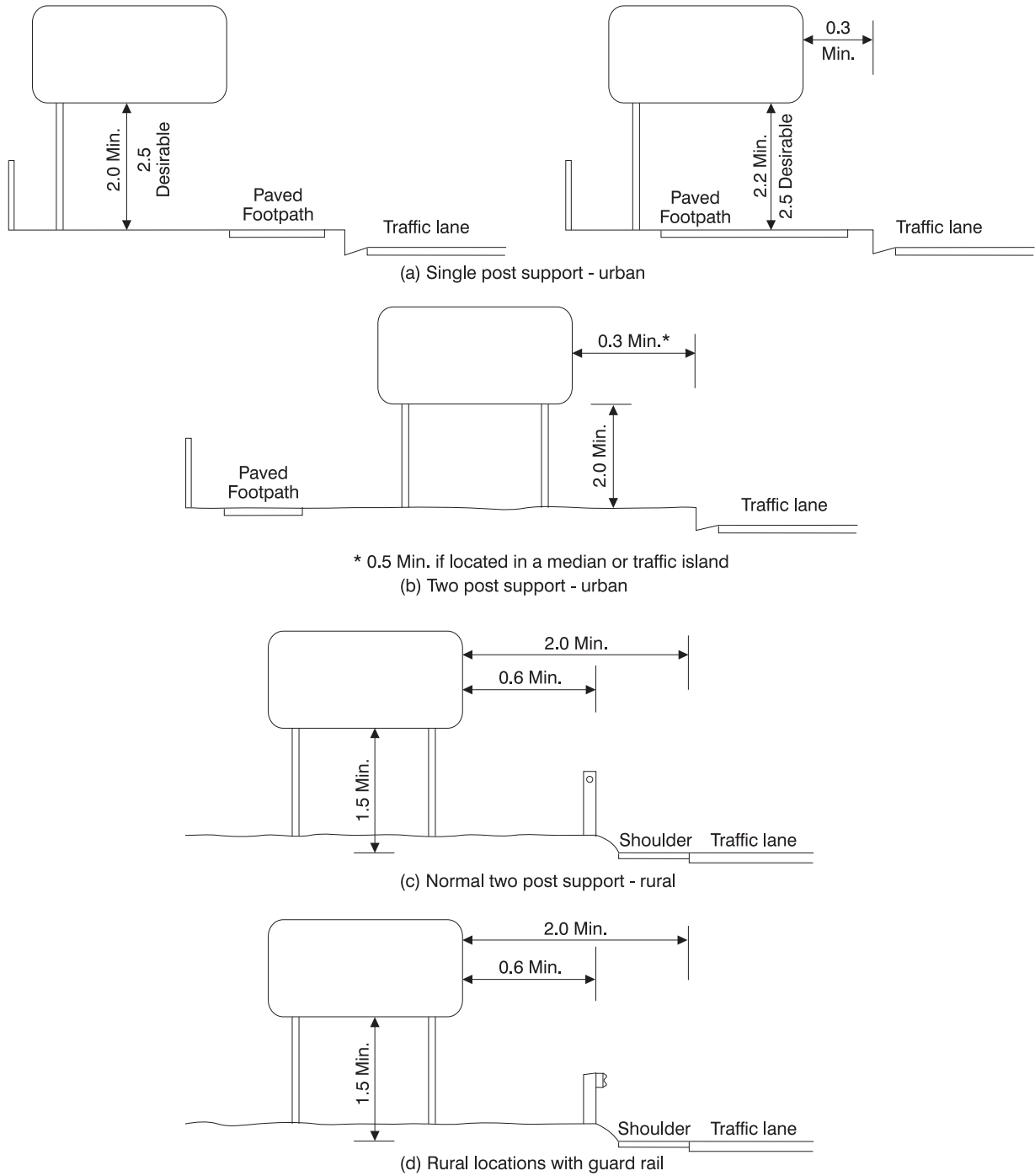
Overhead signs provide means of displaying essential traffic information on wide multilane roads, where lane use control is required, or where space at the roadside is insufficient to accommodate a roadside sign. They may also be the only means of providing adequate viewing distance. On expressway type roads, overhead signs are especially suitable for complex or closely spaced interchanges or multilane exits.

Overhead signs may also be desirable where the environmental background would detract from the essential message of a roadside sign. The composition and speed of traffic may also be influencing factors.

Overhead signs are generally of the directional and lane-control types, and are generally supported on cantilever, butterfly or gantry structures, or on overbridges.

Overhead signs shall be mounted a minimum of 5.3 m above the highest level of the carriageway. This is particularly important if there is no alternative route for occasional high loads. The height may be reduced to 4.6 m if the sign projects over a shoulder or lane which is used only for parking or emergency stopping. The greater height is preferred where possible.

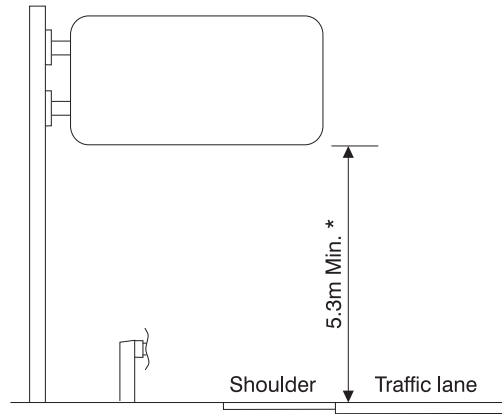
Height requirements for overhead signs are illustrated in Figure B1.



NOTE: Subject to any maximum offsets shown in this Figure, sign supports should be erected as great a distance as practicable away from the roadway (see Clause 2.1.1.(b)).

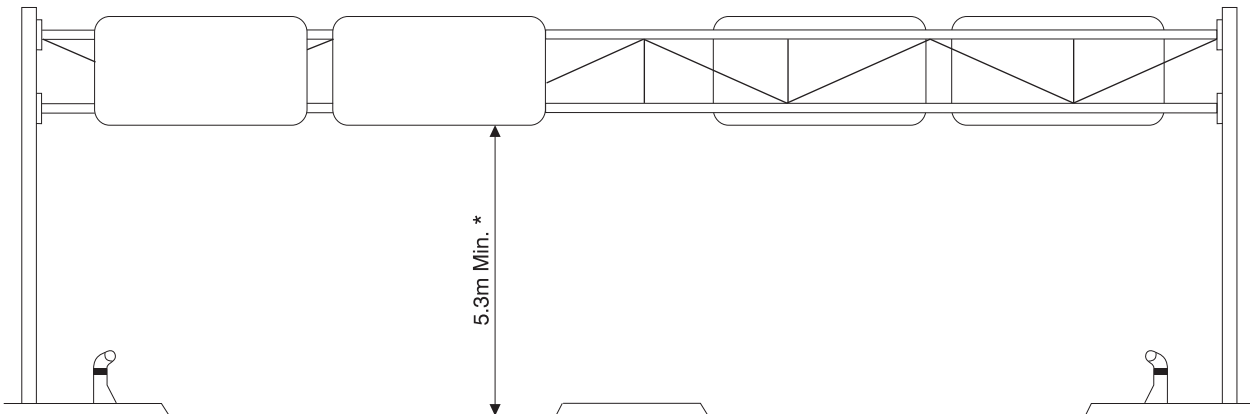
DIMENSIONS IN METRES

Figure B1 LATERAL POSITIONING AND MOUNTING HEIGHT OF ROADSIDE SIGNS



* Where the sign does not overhang the running lanes the minimum may be reduced to 4.6 m.

(a) Cantilever support



* The minimum clearance applies to catwalks, lighting brackets or other fixtures, where these project below the sign

(b) Gantry support

NOTE: For preferred minimum mounting heights, see Clause 1.12.3.6 of Part 1 of this Manual.

Figure B2 TYPICAL STRUCTURES FOR OVERHEAD SIGNS