SECTION 7

GUIDE SIGNS

March 2010

Note: **The page numbers in this electronic issue are different to those in the 1998 hard copy issue.**

NZ TRANSPORT AGENCY
WAKA KOTAHI

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7.1 INTRODUCTION

7.1.1 GENERAL

Clear and efficient guide signing is an essential part of road and traffic engineering; road users depend on these signs for information and guidance. A road with poor and/or badly maintained signing is an unsatisfactory road in the user's view.

This section of the Manual sets out the requirements for guide signing on State Highways and details the use, design, location and illumination of these signs. It is strongly recommended that, for consistent guide signing throughout New Zealand, all local roading authorities also adopt these requirements for guide signing on roads under their control.

The Australian Standard: AS 1742 - *Manual of Uniform Traffic Control Devices, Part 2: Traffic control devices for general use* is the basis of this section of the Manual. AS 1742 should be used as the first reference when solving any guide signing situation not covered by this Manual.

Guide signs are normally provided at intersections and inform road users about directions and distances to destinations. Guide signs must therefore give road users their message clearly and at the correct time. The message must be unambiguous, quickly understood and not given:

- too soon, because the information may be forgotten before it is needed, or
- too late, because any subsequent vehicle manoeuvres may not be able to be completed safely.

Guide sign design rules take into account many factors. The most important of these are:

- the ability of a driver to read, understand and react to the information displayed,
- the number of lines of legend on a sign,
- letter style,
- letter size, and
- sign location.

The guide sign design rules in this Manual conform as closely as possible to the protocol on road signs proposed by the UN World Conference on Road and Motor Transport held in Geneva in 1949 and adopted for use in about 30 countries, including most of those in Europe. Signs will therefore be similar to the roadsigns in many other parts of the world, with obvious advantages for visitors to this country and vice versa.

NOTES:

1. ***Motorist Service information is not shown on guide signs.***
2. ***Tourist information may, under certain conditions, be combined with guide signing.***
3. ***Motorist Service and Tourist signing is covered in Sections 8 and 9 of this Manual.***

7.1.2 TYPES OF GUIDE SIGN

Five types of guide sign are detailed in this Manual and are used in the following manner:

- **Before an intersection:** Advance Direction (AD) and Advance Lane Designation (AL) signs.
- **At an intersection:** Intersection Direction (ID) signs and Street Name (SN) signs at intersections.
- **Past an intersection:** Confirmation Direction (CD) signs or Route Marker (RM) signs.
- **To indicate a destination has been reached:** Place Name (PN) signs.
- **To indicate the beginning, continuation and end of a marked route:** Route Marker (RM) signs.

7.1.3 PROVISION OF GUIDE SIGNING

(a) Guide signing must be provided where:

(i) **A state highway intersects another state highway:** An AD (Map type) / ID / CD sign sequence is provided for all state highway traffic movements. Any other local road traffic movements should be signed to the standard appropriate for their local road status.

(ii) **A state highway changes direction at an intersection:** An AD (Map type) / ID / CD sign sequence shall be provided for all state highway traffic movements. All other local road traffic movements should be signed to the standard appropriate for their local road status.

(iii) **A state highway intersects with a major local road, or a major local road intersects with another major local road:** At state highway intersections an AD (stack type) / ID / CD sign sequence should be provided for all state highway and major local road traffic movements.

At major local road intersections the main road traffic movements should have an AD (stack type) / ID / CD sign sequence. Side road movements should be signed to the standard appropriate for their local road status.

Figures 7.13.1, 7.13.2, 7.13.4, 7.13.5 and 7.13.7 illustrate typical guide signing layouts for the types of intersection described above.

(b) Guide signing should be provided where a state highway intersects with a minor local road and where a major local road intersects with a minor local road. At these intersections guide signing should be provided in the following manner:

(i) **Where a destination is indicated:** Normally only an ID sign showing the destination and distance to it is provided. The sign should be located at the intersection with the minor or local road.

At intersections where the visibility to the ID sign is restricted, or where approach speeds are very high, additional advance direction information may be necessary. In these cases an AL-2 type sign with directional information in the form of:

or

may be located approximately 400 m in advance of the intersection.

Sign layout is determined by the length of the destination name and the best visual appearance for the sign.

(ii) Where only a road or street name is indicated: In rural areas street name signs should be provided by the main road controlling authority as part of their guide signing system.

In urban areas street name signs should be provided by the urban local authority, as part of their street signing system.

7.1.4 GUIDE SIGN DETAILS

(a) GENERAL

Details common to types of guide signs are described in the following clauses.

Specific details for the signs listed in Section 7.1.2 above are given in Sections 7.2, 7.3, 7.4, 7.5, 7.6, 7.7 and 7.8 of this Manual.

Sections 7.10, 7.11 and 7.12 of this Manual contain details of the lettering styles used on guide signs, a recommended sign layout procedure and an indication of the mountings required for guide signs.

(b) COLOUR

Guide sign colours must comply with the requirements of AS/NZS 1906.1:2007 - *Retroreflective materials and devices for road traffic control purposes, Part 1: Retroreflective materials*.

(i) State Highway Guide Signs: Except for ID-6 fingerboard signs all AD, AL, ID and CD signs have white legends and borders on standard green backgrounds.

Route markers, either free-standing signs or symbols on guide signs, have white legends and borders on red backgrounds.

(ii) Local Roading Authority Guide Signs: Except for ID-6 fingerboard signs all AD, AL, ID and CD guide signs should have white legends on blue backgrounds, to distinguish local roads from state highways. Markers for urban routes should conform to the system described in Section 7.8 of this Manual and have black legends and borders on white backgrounds.

(ii) ID-6 fingereoard signs: Black legends on yellow backgrounds.

(iv) Street Name Signs: Normally, white lettering on blue backgrounds.

(c) REFLECTORISATION

All state highway guide signs must be fully reflectorised. Local authority guide signs should be fully reflectorised.

(d) SHAPE

Guide signs are generally rectangular in shape, have their long axis horizontal and all corners rounded. Corner radius is approximately 0.125 times the smallest dimension of the signboard but should not normally exceed 300 mm.

Intersection direction signs may be shaped to a point, at one or both ends, to indicate the direction or directions to be followed.

Support framing or edge stiffening must never extend beyond the outline of a signboard, including the rounded corners.

(e) BORDERS, EDGE STRIPS AND DIVIDING LINES

(i) Borders: Most guide signs have plain borders which extend to the edges of the sign. Border width should be 1.25, and not more than 1.50, times the stroke width of the largest letters used on the sign, rounded to the nearest 5 mm.

(ii) Dividing lines: Dividing lines are used on stack type advance direction signs to form panels which contain all directional and/or driver information relevant to a particular direction.

The width of a dividing line should be 075 times the stroke width of the largest letters used on the sign, rounded to the nearest 5 mm.

(f) LETTER STYLE

Guide sign letter shapes must conform to the alphabets defined in AS 1744-1975: *Standard Alphabets for Road Signs*.

The Modified Series E/lower case alphabet, with initial capitals, is only used for destination and stage names.

All other lettering on guide signs should be in Series D or E CAPITALS of the same height as the lower case letters used for the destination legend.

This includes:

- additional directional information,
- additional driving instructions,
- minor destination names, and
- street names.

Where a local authority has adopted another lettering style for street name signs in an urban area that style may be used for any street names shown on state highway guide signs in that area, to maintain consistency.

(g) LETTER SIZE

Letter size depends on approach speed and lateral and/or vertical placement of the sign.

The minimum letter sizes to be used on guide signs for the types of roads listed below are:

Road type	Minimum letter size
All roads	ID-6 fingerboard signs: 120 Series D, medium spacing
Two Lane Urban Roads with one lane in each direction	AD, AL and CD signs: Not less than 120 Modified E/90 LC. ID signs: Not less than 160 Modified E/120 LC.
Two Lane Rural Roads and Urban Roads with up to two lanes in each direction	Not less than 160 Modified E/120 LC.
Multi-lane Rural Roads with more than two lanes in each direction	Not less than 160 Modified E/120 LC
Overhead advance direction signs in any location	Not less than 240 Modified E/180 LC

These minimum letter sizes may be too small for some signs, particularly those with more than the recommended amount of legend. The procedure given in Section 7.10: *Letter Size and Type for Guide Signs* should be used to check the letter sizing on all signs.

(h) LETTERING MODIFICATIONS

Computer modified lettering may be used but only with the consent of the road controlling authority.

When lettering is to be computer modified the following rules apply:

(i) Letter shape: Basic letter shapes shall conform to the AS 1744-1975 alphabets.

(ii) Expansion and contraction: The degree of horizontal expansion or contraction shall be uniform within any letter, or numeral, or within any set of characters. No expansion or contraction shall exceed 15 percent of the design base letters for:

- character width,
- stroke width, and
- the spacing between characters.

(iii) Stroke width: Letter or numeral stroke width shall be uniform within any set of characters, and shall be reduced or increased, in the same proportion as the horizontal reduction or expansion of the character.

(iv) Spacing: Spacings between characters shall be altered in the same proportion as the horizontal alteration.

(j) OTHER FACTORS

Other factors which may affect letter or sign size are:

- distraction due to roadside activity and/or background,
- short legends - a sign may need to be enlarged to ensure that it is more conspicuous,
- short and long legends - it may be necessary to either increase the letter size of the short legend or to select a letter size which ensures each has approximately equal visual impact,
- a need to emphasise a more important direction by making it larger than other place names on the sign, and
- the use of standard abbreviations to reduce the overall length of a sign where one destination name is of abnormal length, eg. RD for Road, ST for Street, AVE for Avenue and MWY for Motorway.

(k) LEGEND

The amount of legend on a guide sign will vary according to the particular sign's function and the amount of information shown.

Guide sign design rules deliberately restrict the amount of legend that can be shown to what has been found by research to be the maximum amount of information a driver can reasonably read, understand and act on during the time a sign is within legible range.

Additional legend should not be added to guide signs because it will significantly reduce a driver's ability to read the message displayed and to act safely on the information received.

(m) DESTINATIONS

The state highway guide signing system is designed for route continuity and use by long distance travellers, strangers to an area and tourists, ***it is not intended to provide detailed local road user information.*** These functions should be provided by local authority, motorist service and tourist signs.

The mandatory stage and destination names used on guide signing for the state highway roading system were adopted after extensive consultation with many interested parties, including AA and tourism organisations and are detailed in Section 14. The names chosen were ***"places likely to be known to many drivers"*** and/or ***" shown prominently on most road maps"*** and they are considered to be the best combination of place names to give:

- a logical and consistent state highway signing system with realistic staging lengths, and
- allow for the addition of intermediate place names, without exceeding the maximum number of destinations allowed to be shown on signs.

Place name spelling shall be in accordance with that approved by the New Zealand Geographic Board. In the case of Maori names, where macrons are included in the approved spelling these shall shown on guide signs*.

The number of names that may be shown on each type of guide sign is determined by the specific sign design rules and these generally limit the number of names or lines of legend on a sign. The introduction of additional minor or intermediate destination names is usually determined by the requirement to show these names on all subsequent guide signing until those places are reached.

Additional minor or intermediate destination names should be shown on a *"distance from sign"* basis and further names introduced on a "roll-over basis" as places are reached.

Local authority road destination names should be determined in terms of importance of the destination on the local roading network.

(n) ROUTE MARKER SYMBOLS

Route marker symbols supplement destination names and form a very important part of the guide signing system, particularly for travellers who are not familiar with the English language.

State highway route marker symbols are incorporated into all state highway direction indication legends. Urban route marker shields may also be shown on state highway guide signs, where appropriate.

To be effective the numeral(s) on a route marker symbol must be at least the same size as the lettering used for the associated destination name.

Route marker symbols are always positioned between the destination name and the arrow or chevron stripe, direction indicator.

(o) STREET NAMES

Street names are not usually shown on guide signs.

Where it is desirable to show the name of an important street, or when the "destination" has to be a street name, it should be shown in the following manner:

- All lettering should be Series D CAPITALS, in the same size as the lower case letters of the destination name.
- On AD signs the street name should be shown in the same colour as, and immediately above, the destination name, or in a contrasting coloured insert panel placed immediately above the destination name.
- On ID signs the street name should be shown as an additional plate mounted immediately above the ID sign, or in a contrasting coloured insert panel placed immediately above the destination name.

(p) TOLL ROADS

(1) Notification on Guide Signs

If the destination named on an AD or ID sign involves use of a toll road and this intersection gives best access to the alternative route, then the words TOLL ROAD should be shown in yellow capital lettering on a blue rectangular panel with yellow border immediately above the destination name.

(2) Alternative Route

When a toll road has been notified, it is usually wise to also give advice about the alternative free route. The words FREE ROUTE should be shown on appropriate guide signs in black capital lettering on a white rectangular panel immediately above the relevant destination name(s).

(3) Toll Facilities Signs

Examples of Toll Road signs

Signs that relate specifically to the beginning and end of toll roads, and signs that give details of toll charges, payment options, conditions and warnings about penalties shall have this colour scheme:

LEGEND	:	Reflectorised yellow
BACKGROUND	:	Reflectorised blue
BORDER	:	Reflectorised yellow
TOLL SHIELD	:	Reflectorised white/red

Refer to MOTSAM Part 3 for further design details.

Note: Guide signs located within toll roads shall retain the standard white legend and border on green background style.

(q) DISTANCES

Distances on guide signs shall be shown as:

Distance	Increment	Shown as
Up to 500 metres	50 metre	"xx m"
Between 500 metres and 1 kilometre	100 metre	"xxx m
1 kilometre or more	Nearest kilometre	"xx km"

* Refer to http://www.linz.govt.nz/core/placenames/placenamedecisions/maori-placenames/index.html

(r) LAYOUT

A method for laying out guide signs and a worked example for an advance direction sign is given in Section 7.11: *Guide Sign Layout*.

Typical layouts for guide signs are given in Sections 7.2, 7.3, 7.4 and 7.5.

Normally, guide signs should conform to one of the typical layouts illustrated but, when a special sign is required, the following general sign layout rules shall apply.

(i) The sign should be modelled on the closest typical guide sign layout.

(ii) The horizontal spacing between words on one line should be the normal spacing between the last letter in the first word and the first letter in the second word, plus the width of the letter N.

(iii) The horizontal spacing between words and numbers should be approximately the capital letter size of the lettering used for words on that line.

(iv) A horizontal space of approximately 0.80 times the capital letter size of lettering used for adjacent words should be provided between:

- a word and a direction arrow,
- a word and a route marker symbol, and
- a route marker symbol and a direction arrow.

(v) A horizontal space of approximately 0.65 times the capital letter size of the lettering used for adjacent words on the line should be provided between:

- a word and a chevron direction indicator,
- a route marker symbol and a chevron direction indicator, and
- a word and a route marker symbol, when the route marker symbol is followed by a chevron direction indicator.

(vi) The vertical spacing between lines of words should be not less than 0.50 times the capital letter size of lettering used for words on those lines.

The spacing should be increased to at least 0.75 times the capital letter size when:

- the upper line contains lower case letters which include descenders, or
- increased clarity or definition is required.

(vii) Distance units:

When numerals are followed by a unit indication, eg. 5 km, 300 m, 4 t, the unit is shown in Modified Series E/ lower case lettering of approximately 88% of the adjacent numeral height, rounded to the nearest 5 mm.

The spacing between the numeral and the unit indicator should be 0.5 times the numeral height.

(viii) Top, bottom and edge spaces:

These spaces are measured from the legend to the inside of the border or internal dividing line and are:

1. **Top and bottom spaces between capital letters and a border or an internal dividing line:** Approximately 0.80, and not less than 0.40, times the size of adjacent capital letters.

2. **Top and bottom spaces between a directional arrow or route marker symbol and a border or an internal dividing line:** Not less than 0.40 times the size of adjacent capital letters.

3. **Edge spaces between a border and the start or end letter of a single line legend:** 1.0, and not less than 0.50, times the size of the capital letters of words in that line of legend.

   Where the top or bottom space is greater than 0.50 times the size of the capital letters, end spaces should be at least 0.60 times the size of the capital letters.

4. **Edge spaces between a border and the start or end letters of a two line legend:** Not less than 0.60 times the size of the capital letters used for words in those lines of legend.

5. **Edge spaces between a border and a directional arrow or a route marker symbol:** Approximately 0.80, and not less than 0.60, times the size of the capital letters used for words on the associated line of legend.

(ix) The legend should be visually centred on the sign unless some special effect, eg. a directional bias, is required.

(s) LOCATION

Guide signs should be located on the left side of the road because this is where drivers normally expect to find them. In some circumstances they may need to be mounted on the right side of the road or above the carriageway.

Sign location details are given in:

- Section 1.7: *General sign location details*, and
- Sections 7.2, 7.3, 7.4, 7.5 and 7.6.

Very large roadside mounted guide signs, unusual road layouts and/or difficult adjacent topography may require special consideration and warrant departures from the normal sign location rules.

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

At some channelised intersections guide signs may need to be located on traffic islands and/or the right side of roadways. They should, if possible, be located within a driver's normal line of vision as they approach the intersection. If this cannot be achieved, they should be located on the side of the intersection where a driver is most likely to be looking when making a manoeuvre.

NOTE: ***Guide signs should never be located where they could obscure a driver's view of approaching or conflicting traffic, or pedestrians crossing the road.***

(t) MOUNTING

Guide signs should be erected as far as practicable away from the edge of the carriageway, subject to:

- the lateral clearance requirements and visibility constraints which are specified in Section 1.7.3 and illustrated in Figures 1.3, 1.4 and 1.5, and
- any visibility constraints due to roadside obstructions.

On high-speed roads the use of breakaway supports must be considered for any guide sign likely to be struck by vehicles. Alternatively, a sign may be placed behind a guardrail erected for another purpose, if that is an appropriate location for the sign.

Where large guide signs need to be positioned in an urban area, the signs and their supports should present a pleasing appearance. Structures which completely span a footpath with supports on each side of it are undesirable.

Sign supports should not be erected where pedestrians are likely to walk into them at night and. Single post mountings, ie. flag type signs, should be used in these cases.

Sign panels must be erected in a vertical plane and be angled slightly away from the driver's line of sight to minimise specular reflection problems. Refer to Section 1.10 and Figure 1.2 for sign orientation details.

An indication of the size and number of supports required for guide signs together with typical mountings and spacing between posts is given in Section 7.12: *Guide Sign Mounting*.

Typical methods for supporting roadside and overhead signs are shown in Section 1: *Introduction*, Figures 1.3, 1.4 and 1.5.

7.2 ADVANCE DIRECTION SIGNS

7.2.1 GENERAL

Advance Direction (AD) signs are located on the approaches to intersections. They indicate the destinations on each road leading away from the intersection including, where appropriate, the next major destination on those roads. Where applicable the signs show state highway, regional and/or local route marker symbols and may also include the names of important intersecting roads.

7.2.2 APPLICATION

(a) Advance direction signs must be provided on:

- all approaches to state highway / state highway intersections,
- all state highway approaches to intersections where a state highway changes direction, and
- all approaches to state highway / major local road intersections.

(b) Advance direction signs should be provided where:

- a state highway or major local road may be confused with another local road,
- major local roads meet or cross.

(c) Advance direction signs are normally located at the roadside but overhead signs should be considered when:

- a suitable roadside location cannot be found in an urban area, or
- the conspicuity or visibility of a roadside sign for an important intersection is considered inadequate.

7.2.3 FORMAT AND USE

Two types of advance direction sign are used:

- MAP signs, and
- STACK signs.

(a) MAP Signs

Map signs, in an AD-4 or AD-5 format, must be provided on all approaches to state highway / state highway intersections and will show a simplified diagram of the geometric intersection layout.

Map signs may also be used:

- at other complicated intersections,
- at roundabouts,
- for successive road junctions, and
- where a stack sign cannot adequately show an unusual intersection or roading layout.

The letter size used for map sign legends must be no smaller than that required for the equivalent stack sign in the same location. This will usually result in a sign considerably larger than the equivalent stack sign.

When a route marker symbol is shown it should be positioned:

- in the same manner as a stack sign, ie. on the same line, and adjacent to, a destination name, or
- adjacent to the point of the relevant map directional arm.

Typical examples of map type advance direction signs are shown in Figures 7.2.4 and 7.2.5.

(b) STACK Signs

Stack signs, in an AD-1, AD-2 or AD-3 format, must be provided on all state highway approaches to state highway / major local road intersections.

Stack signs should also be provided on:

- the major local road approaches to state highway / major local road intersections,
- all approaches to major local road / major local road intersections.

Stack signs should show destinations, the appropriate directional indicators and, where applicable, route marker symbols.

Direction arrows should only indicate the general direction a motorist must take to travel towards the destination shown, they do not necessarily show the exact geometric layout of the intersection. Direction arrows should point:

- vertically upwards,
- horizontally, or
- be inclined upwards at 45 degrees to the horizontal.

NOTES:

1. ***Downward pointing arrows are never used on stack signs.***
2. ***Horizontal and angled arrows are placed nearest the end of the panel to which they point.***

The vertical sequence of panels on an advance direction stack sign should, as far as practicable, be:

- straight ahead arrows in the top panel,
- angled arrows above horizontal arrows, and
- angled or horizontal arrows indicating opposite directions placed in alternate panels.

When route marker symbols are shown they are always placed between the destination name and the directional arrow. When a single route marker symbol applies to two destinations in different directions an AD-3 type sign should be used and the route marker symbol positioned centrally at the top of the sign. A straight ahead panel may be added above an AD-3 layout, when appropriate.

A procedure for determining the layout of a typical stack type advance direction sign is given in Section 7.11.

Figures 7.2.1, 7.2.2 and 7.2.3 show details of typical stack type advance direction signs.

7.2.4 LEGEND

AD-1 and AD-2 stack signs should not have:

- more than five (5) lines of legend, and
- more than two (2) lines in any one panel.

AD-3 stack signs may have:

- up to four (4) lines of legend, and
- a route marker symbol.

AD-4 and AD-5 map signs should not show:

- more than five (5) destination names, and
- more than two (2) names in any direction.

The next approved stage or destination name must be shown on an AD sign and, where necessary, the next place of importance on that route may also be shown. When two destination names are shown the top one should be the first place reached on that route.

Additional destinations should be chosen on the basis of places which drivers *"are likely to know by name"* and/or *"are shown prominently on most road maps"*.

It may sometimes be necessary to use the name of a place which is not large but is important due to its location as an intermediate destination, eg. a junction of two State Highways or a place which is located reasonably close to an important intersection.

Destinations on roads which lead off the main route should not normally be shown until the intersection with those roads is reached. The exception to this principle is where the main route splits into two routes of approximately equal importance, then destinations on both routes may be indicated from some appropriate point on the main road.

Distances to destinations are not shown 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 plate erected below the main sign.

The size of numerals in route marker symbols should be at least comparable in legibility with the principal legend of the sign. Refer to Section 7.7 for details of State Highway route marker symbols.

The addition of street names on the relevant sign panel may be desirable in urban situations where a major local road intersects a state highway or another major local road.

7.2.5 LETTERING

Destination and stage names must be shown in Modified Series E/lower case lettering, with initial capitals.

Additional directional or driving instructions, street names, etc are shown in Series D or E CAPITALS, in the same size as the lower case letters of the destination name.

Letter size is dependent on:

- the speed of approaching vehicles,
- the lateral and/or vertical positioning of the sign, and
- the amount of legend on the sign.

All guide signs should be checked for correct letter size by the method given in Section 7.10: *Letter Size and Type for Guide Signs*. A letter size less than the minimum specified in Section 7.1.4(g) should never be used.

7.2.6 LOCATION AND MOUNTING

The main purpose of an advance direction sign is to give drivers approaching an intersection prior information which will enable them to make decisions and, if necessary, to reposition their vehicles before reaching the intersection. The distance at which a sign is located before an intersection is therefore mainly dependent on the speeds of approaching vehicles.

Advance direction signs should be located and mounted in compliance with the general principles given in Section 1 of this Manual - 1.7: *Location*, 1.8: *Mounting Height*, 1.9: *Supports*, 1.10: *Orientation,* and the specific requirements for advance direction signs detailed in (a) and (b) below.

(a) RURAL AREAS

Advance direction signs should be located within the distance ranges given in TABLE 7.2.1, but never less than the minimum distance specified for the particular road environment.

At channelised intersections with separate turn lanes, distances should be measured from the start of the turn lane.

At locations where approach speeds are high and much of the approaching traffic makes a turn at the intersection some extra advance direction information may be needed. In these cases an AL-2 type sign may be erected approximately 400 m in advance of the intersection. This signs should contain a legend such as:

(b) URBAN AREAS

The details given in (a) above will also generally apply in urban areas. However, some desirable sign locations may be unsuitable because of:

- roadside development,
- shop awnings,
- advertising signs,
- intersecting streets, etc.

In urban areas it may sometimes be necessary to cantilever signs out over the road and to locate them much closer to intersections than would otherwise be desirable. The lettering on these signs may need to be increased in size - refer to Section 7.10 for details of how to determine the correct letter size for guide signs.

A supplementary sign showing the distance in metres to the intersection may also be necessary where there are minor side streets between the sign and the intersection. Alternatively, a map type sign may be a better solution in many situations.

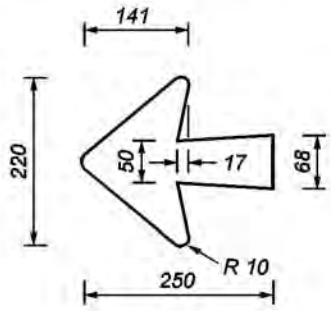
TABLE 7.2.1: LOCATION OF ADVANCE DIRECTION SIGN FROM INTERSECTION

Road Environment		Distance from intersection (m)
Rural	V_{85}: < 75 km/h	80 - 120
	V_{85}: 75–90 km/h	120 - 180
	V_{85}: >90 km/h	180 - 250
Urban	Arterial Roads	As for a Rural environment
	Business and Residential areas	30 - 100

Notes:

1. V_{85} = 85th percentile speed of vehicles approaching the sign position.
2. The distance ranges shown are for signs where simple decisions have to be made or only one or two route choices are available. These should be increased by about one second of travel time for each additional choice or element of complexity.

ARROW DETAILS : *Type D*



STATE HIGHWAY ROUTE MARKER DETAILS

LEGEND	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised red***
BORDER	:	***Reflectorised white***

STATE HIGHWAY SIGN DETAILS

LEGEND	:	***Reflectorised white***
ARROWS	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised standard green***
BORDER	:	***Reflectorised white***

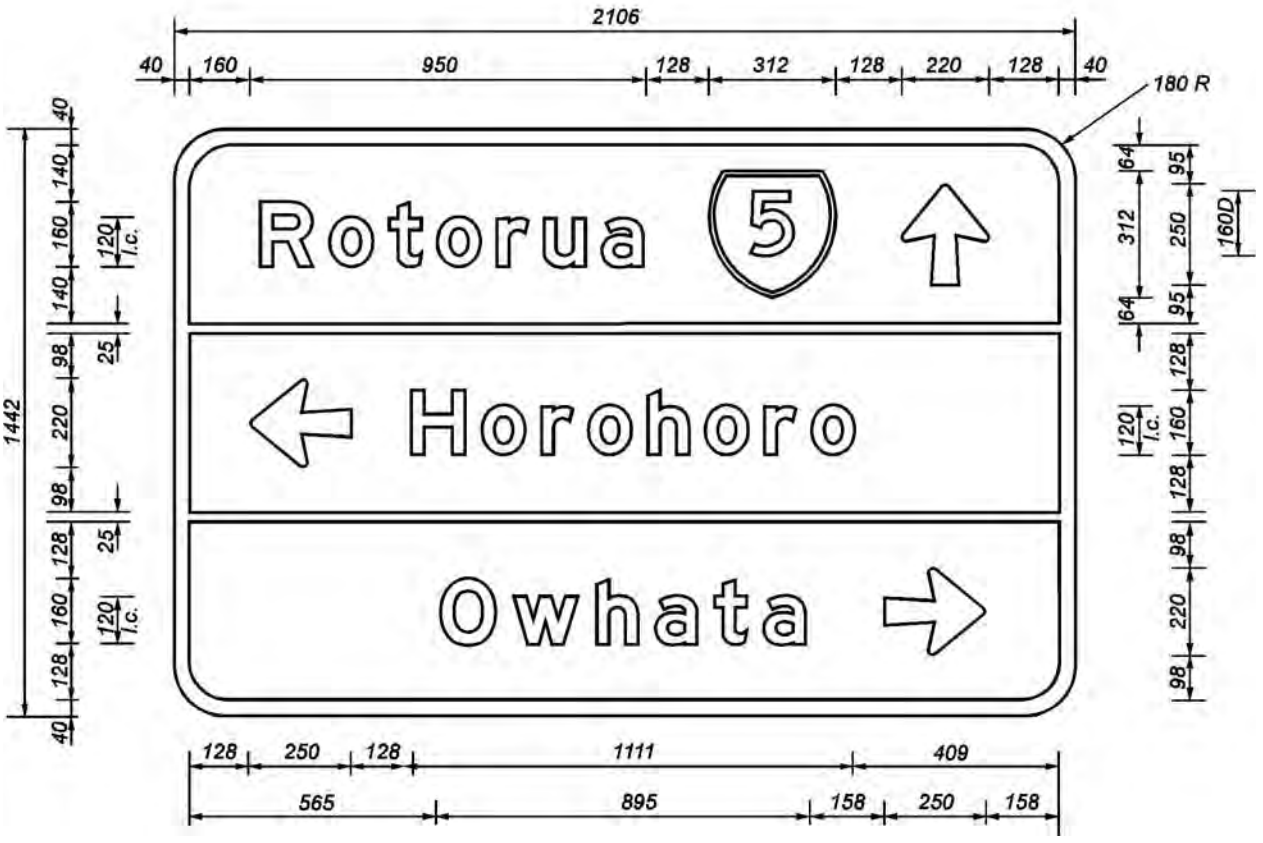
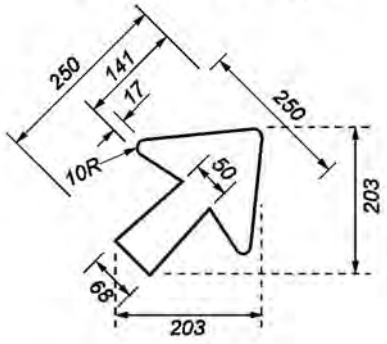


FIGURE 7.2.1 ADVANCE DIRECTION SIGNS TYPICAL AD - 1 SIGN DETAILS

ARROW DETAILS : *Type D*

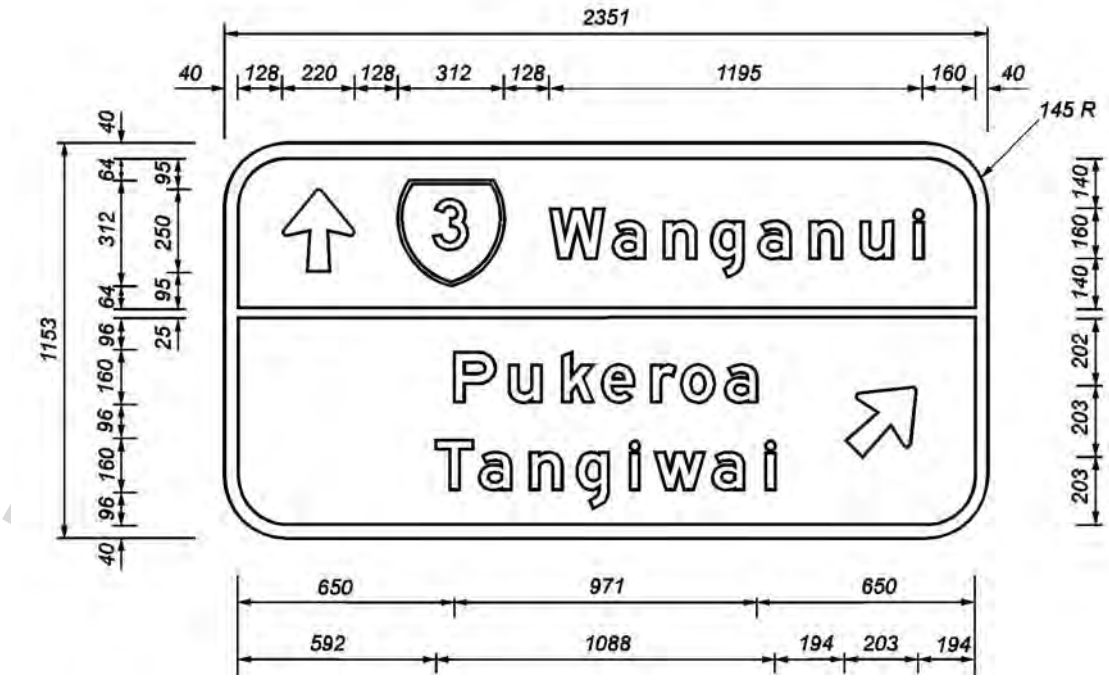


STATE HIGHWAY ROUTE MARKER DETAILS

LEGEND	:	*Reflectorised white*
BACKGROUND	:	*Reflectorised red*
BORDER	:	*Reflectorised white*

STATE HIGHWAY SIGN DETAILS

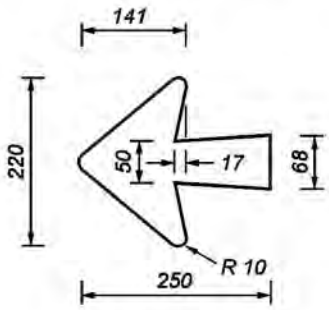
LEGEND	:	*Reflectorised white*
ARROWS	:	*Reflectorised white*
BACKGROUND	:	*Reflectorised standard green*
BORDER	:	*Reflectorised white*



ADVANCE DIRECTION SIGNS
TYPICAL AD - 2 SIGN DETAILS

FIGURE 7.2.2

ARROW DETAILS : *Type D*

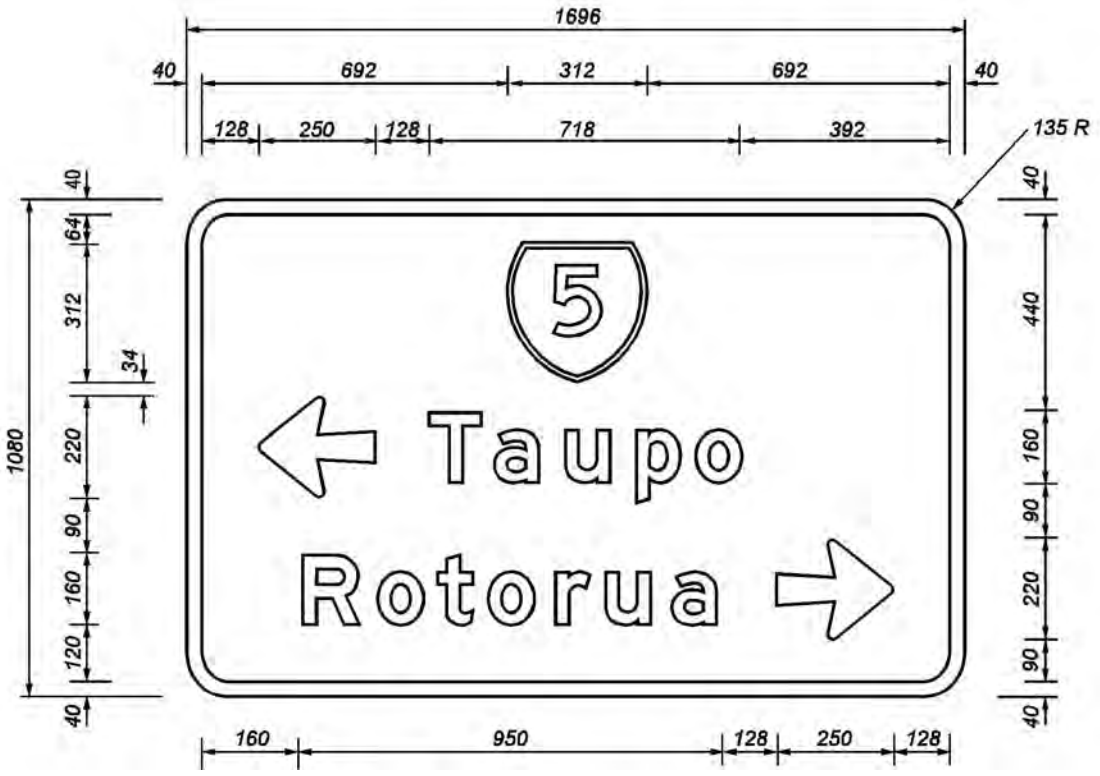


STATE HIGHWAY ROUTE MARKER DETAILS

LEGEND	:	*Reflectorised white*
BACKGROUND	:	*Reflectorised red*
BORDER	:	*Reflectorised white*

STATE HIGHWAY SIGN DETAILS

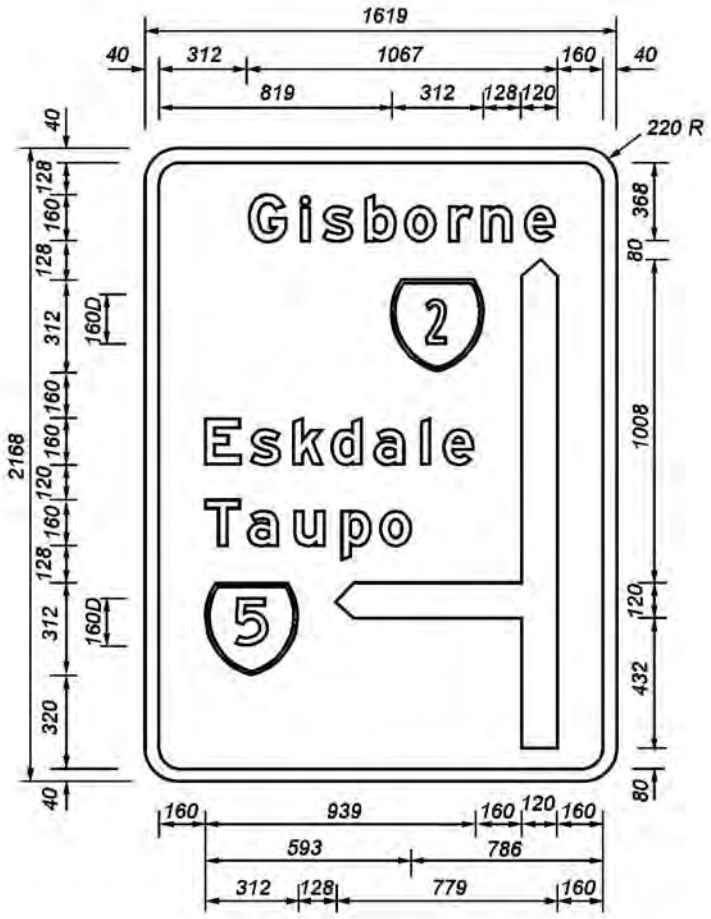
LEGEND	:	*Reflectorised white, 160 Mod. E (120 l.c.)*
ARROWS	:	*Reflectorised white*
BACKGROUND	:	*Reflectorised standard green*
BORDER	:	*Reflectorised white*



ADVANCE DIRECTION SIGNS
FIGURE 7.2.3 TYPICAL AD - 3 SIGN DETAILS

STATE HIGHWAY SIGN DETAILS

LEGEND	:	*Reflectorised white, 160 Mod. E (120 l.c.)*		
MAP ARMS	:	*Reflectorised white, Point 90°*		
ROUTE MARKER	:	*Legend*	:	*Reflectorised red*
		Background	:	*Reflectorised white*
		Border	:	*Reflectorised white*
BACKGROUND	:	*Reflectorised standard green*		
BORDER	:	*Reflectorised white*		

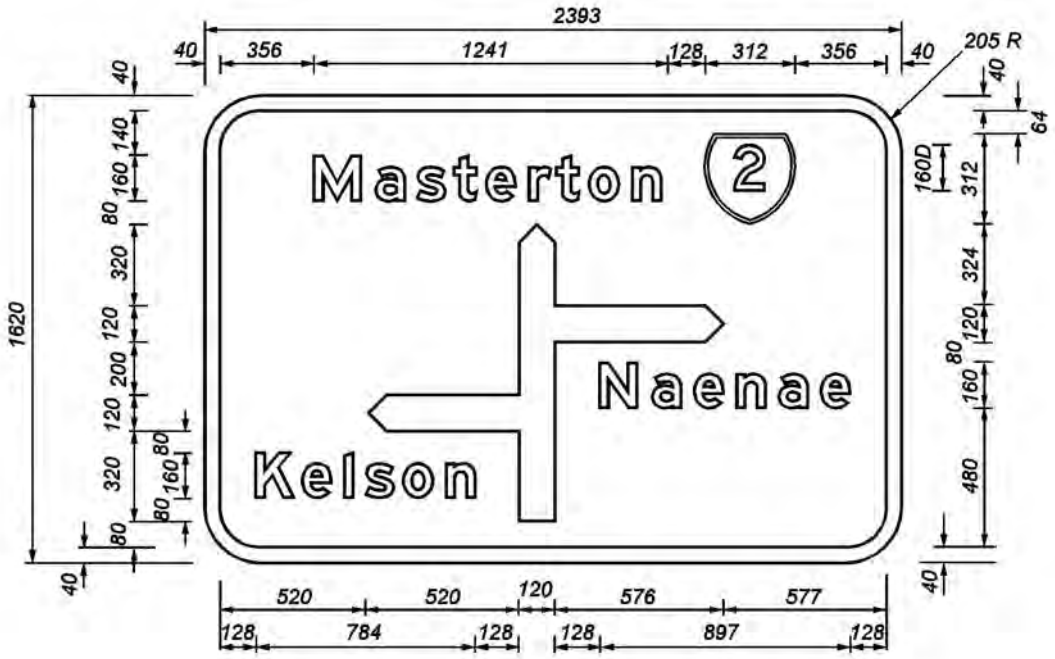


Layout for a simple "T" type intersection.
Sign size is proportioned in relation to letter size for road class.

ADVANCE DIRECTION SIGNS
TYPICAL AD - 4 SIGN DETAILS FIGURE 7.2.4(a)

STATE HIGHWAY SIGN DETAILS

LEGEND	:	*Reflectorised white, 160 Mod. E (120 l.c.)*
MAP ARMS	:	*Reflectorised white, Point 90°*
ROUTE MARKER	:	*Legend : Reflectorised red*
		Background : Reflectorised white
		Border : Reflectorised white
BACKGROUND	:	*Reflectorised standard green*
BORDER	:	*Reflectorised white*



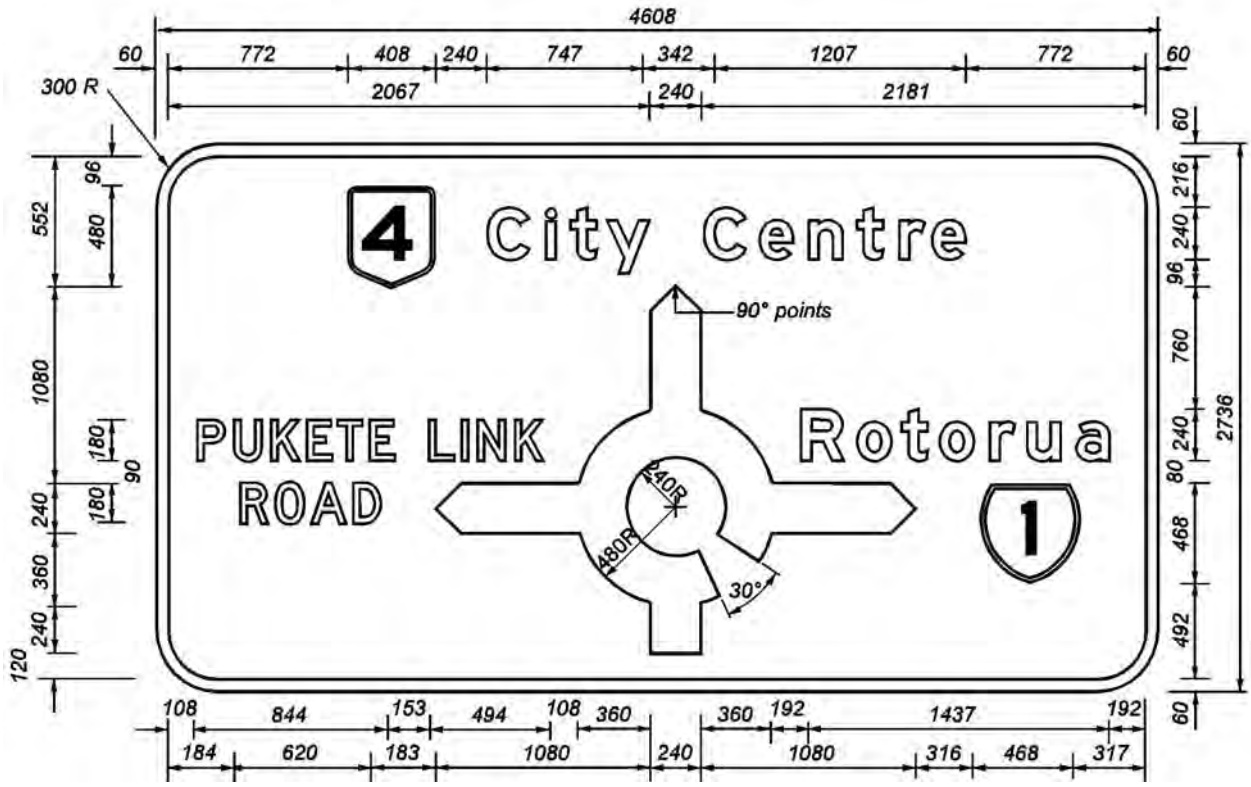
Layout for a staggered "T" type or crossroad intersection.
Sign size is proportioned in relation to letter size for road class.

ADVANCE DIRECTION SIGNS

FIGURE 7.2.4(b) TYPICAL AD - 4 SIGN DETAILS

STATE HIGHWAY SIGN DETAILS

LEGEND	:	***Reflectorised white, 240 Mod. E (180 l.c.); 180 Series D caps.***
MAP ARMS	:	***Reflectorised white, Point 90°***
ROUTE MARKER - STATE HIGHWAY:		
Legend	:	***Reflectorised white***
Background	:	***Reflectorised red***
Border	:	***Reflectorised white***
ROUTE MARKER - URBAN ROUTE:		
Legend	:	***Black***
Background	:	***Reflectorised white***
Border	:	***Black***
BACKGROUND	:	***Reflectorised standard green***
BORDER	:	***Reflectorised white***



ADVANCE DIRECTION SIGNS
TYPICAL AD - 5 SIGN DETAILS

FIGURE 7.2.5

7.3 ADVANCE LANE DESIGNATION SIGNS

7.3.1 GENERAL

Advance Lane Designation (AL) signs are normally only necessary on the approaches to intersections on high volume multilane roads. In these situations drivers may need additional directions or reminders about the correct lane to use for their intended movement at the intersection.

Support structures for overhead advance direction signs are usually very costly and alternative signing which could satisfactorily perform the same functions should be carefully considered.

7.3.2 FORMAT AND USE

AL signs should be located beside or over one or more of the intersection approach lanes.

Conventional advance direction STACK or MAP signs are used in conjunction with AL signs, except where a sign assembly mounted on a gantry over the roadway gives all necessary directional information.

The rules for determining legends on advance direction signs given in Section 7.2.4:*Legend* should also be used to determine legends on AL signs.

Destinations shown on AL signsmust be the same as those shown on the advance direction signs.

When a route marker symbol is shown it should be positioned to give the best visual layout for the sign. This will usually result in a sign layout similar to:

- a confirmation direction sign where the route symbol is located centrally and above the destination name, or
- a panel of an advance direction stack sign where the route marker symbol is located on the same line adjacent to the destination name.

The downwards pointing arrows on AL-1 overhead advance direction signs must be mounted directly over the lane to which they refer.

The minimum letter sizes for guide signs on various road types are specified in Section 7.1.4 (e). Larger lettering may be necessary in some situations.

Series D or E CAPITALS lettering in the same size as the lower case letters of the destination name is used for additional directional or driving instructions given in words.

7.3.3 AL-1 SIGNS

AL-1 signs, or an assembly of AL signs such as that illustrated in Figure 7.3.3 (a), must be positioned with the downward pointing arrow located as nearly as practicable over the centre of the relevant lane.

A sign with an upwards angled arrow is used to show the direction of an off-ramp or turning lane. A multiple sign gantry illustrating this type of layout is shown in Figure 7.3.3 (b).

7.3.4 AL-2 SIGNS

AL-2 signs are used as either:

- a roadside mounted sign, or
- a single overhead advance direction sign which does not project completely over the lane it refers to.

AL-2 signs normally contain additional directional or driving instruction messages, such as:

- LEFT (RIGHT) LANE(S)
- NEXT LEFT (RIGHT), or
- TURN LEFT (RIGHT) (xx m).

7.3.5 LOCATION AND MOUNTING

(a) AL-1 SIGNS:

AL-1 signs must be located where the lanes they refer to are fully developed. To be effective these signs must be readable from a point where drivers can safely manoeuvre into the correct lane(s) before reaching the intersection.

(b) AL-2 SIGNS:

An AL-2 sign should normally be located just before the start of a turning lane and the legend LEFT (or RIGHT) LANE used.

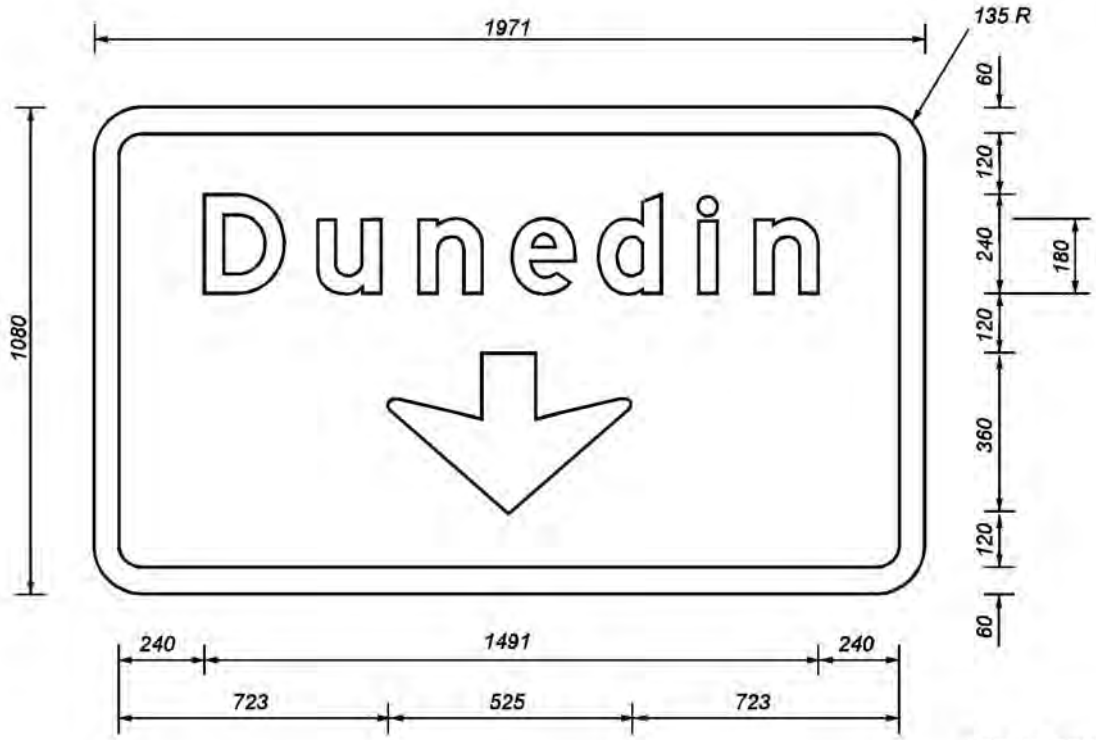
AL-2 signs with direction and distance messages, as noted in Section 7.3.4 above, will usually need to be located further in advance of the intersection.

(c) MULTIPLE SIGNS:

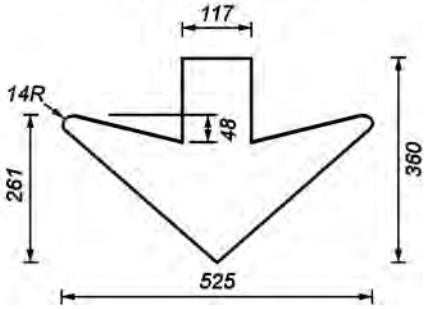
Multiple overhead advance lane designation signs maynot be effective where the road curves just before the sign location, because drivers may not be able to relate the downward pointing sign arrows with the traffic lanes marked on the road pavement.

NB: Refer to the TCDM Part 10 for full details of overhead, motorway and expressway signs.

LEGEND	:	*Reflectorised white; Modified Series E , 240 mm caps, 180 mm l.c.*
BACKGROUND	:	*Reflectorised standard green*
BORDER	:	*Reflectorised white*



ARROW DETAILS



Refer to Part 3 of this manual for full details of overhead, motorway and expressway signs.

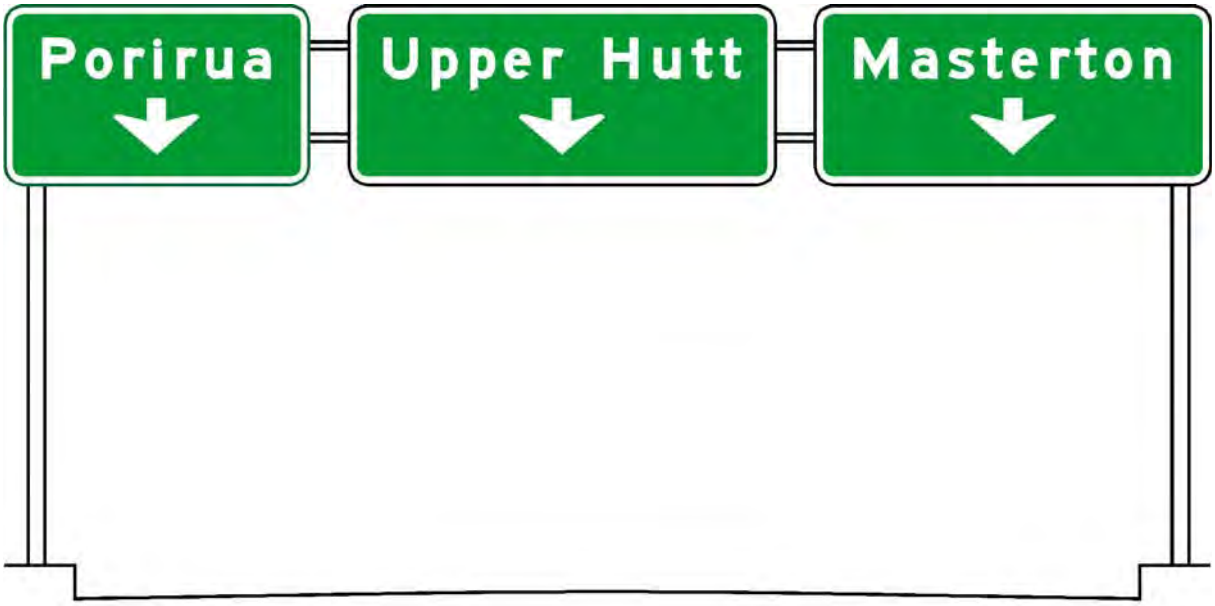
ADVANCE LANE DESIGNATION SIGNS
TYPICAL AL - 1 SIGN DETAILS FIGURE 7.3.1

STATE HIGHWAY SIGN DETAILS

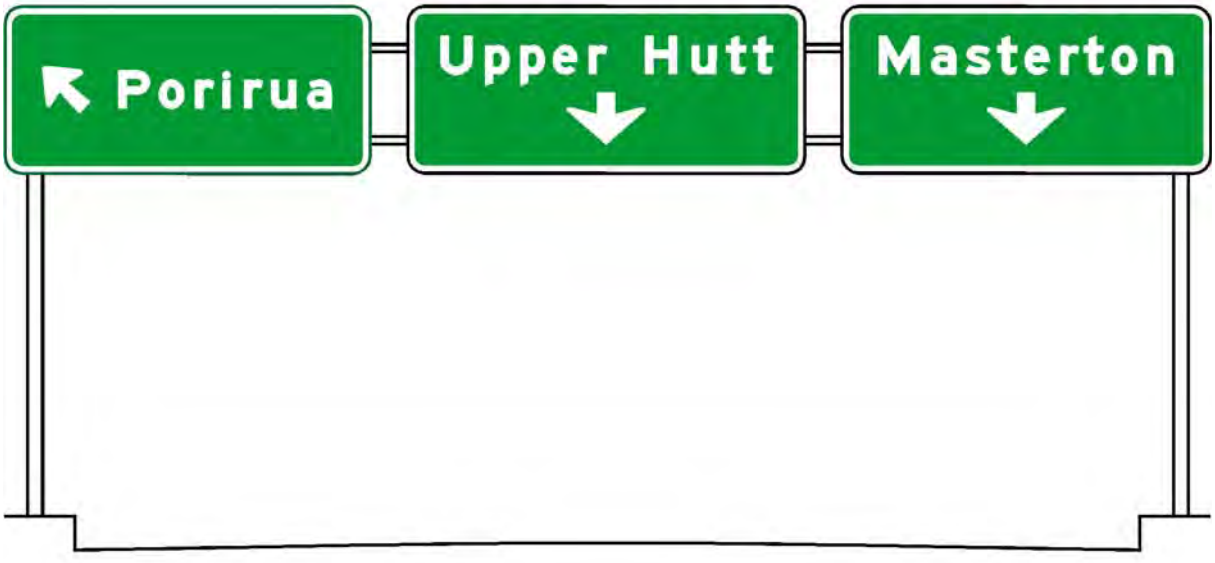
LEGEND	:	***Reflectorised white;*** ***Modified Series E ,*** ***240 mm caps, 180 mm l.c.*** ***180 mm caps***
BACKGROUND	:	***Reflectorised standard green***
BORDER	:	***Reflectorised white***

Refer to Part 3 of this manual for full details of overhead, motorway and expressway signs.

FIGURE 7.3.2 — **ADVANCE LANE DESIGNATION SIGNS**
TYPICAL AL - 2 SIGN DETAILS



(a) LAYOUT FOR STANDARD LANE DESIGNATIONS.



(b) LAYOUT FOR AN OFF-RAMP OR TURNING LANE COMBINED WITH STANDARD LANE DESIGNATIONS.

Refer to Part 3 of this manual for full details of overhead, motorway and expressway signs.

ADVANCE LANE DESIGNATION SIGNS TYPICAL SIGN ASSEMBLY DETAILS FIGURE 7.3.3

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7.4 INTERSECTION DIRECTION SIGNS

7.4.1 FUNCTION

Intersection Direction (ID) signs are located at intersections and show destinations on the roads leading away from the intersection or the street names. All destinations shown on advance direction signs must be repeated on the relevant ID signs.

ID signs also perform two more very important functions and these must be taken into account when positioning the signs at intersections. They:

- indicate the presence of an intersection and the point of conflict with entering traffic, especially if the road pavement is not readily visible, and
- provide a guide for drivers when they are selecting the correct route through a complex channelised intersection, ie. they help to deter wrong-way and misdirected movements.

ID signs do not normally show the names of the intersecting roads. When it is considered necessary to add the name of an important road it may be shown as:

- an additional street name sign plate erected immediately above the ID sign, or
- a coloured insert panel positioned immediately above the destination name on an ID sign.

7.4.2 SHAPE

ID signs are normally rectangular in shape with their long axis horizontal. One or both ends of a sign may be shaped as a point to indicate the direction, or directions, to be followed.

An ID-1 or ID-3 type sign, with a chevron stripe to indicate the direction, should normally be used where the direction indicated is approximately at right angles to the approaching driver.

An ID-2 type sign should be used where the direction indicated is straight ahead or angled away from the approaching driver (up to approximately 45 degrees). An arrow is used to indicate the general direction to be followed and the end of the sign is square.

An ID-2 type square ended sign should also be used to indicate a horizontal direction when mounted with one or more signs indicating angled or straight ahead directions. Figure 7.4.1 illustrates an offset sign layout.

Where lateral space is restricted at urban intersections a rectangular ID-4 type sign layout may be used. On these signs the arrow and route marker symbol are positioned:

- above the destination name for straight ahead direction indications, and
- below the destination name for horizontal or angled direction indications.

NOTE: ***The ID-4 format should only be used at urban intersections where an ID-1 ID-2 or ID-3 sign cannot be located in the space available.***

An ID-1, ID-2 or ID-4 type sign should be used to indicate the more important minor side road destinations.

An ID-6 fingerboard type sign should be used to indicate minor side road destinations.

A SN-1 sign should be used to indicate a street name in rural areas.

7.4.3 LETTERING

Destination and stage names on ID-1. ID-2, ID-3, ID-4 and ID-5 signs are shown in Modified Series E/lower case lettering, with initial capitals.

Destination names on ID-6 fingerboard signs are shown in 120 mm Series D CAPITALS with a medium letter spacing.

Additional directional or driving instructions, street names, etc. are shown in Series D or E CAPITALS, in the same size as the lower case letters of the destination name.

Letter size is dependent on:

- the speed of approaching vehicles,
- the lateral and/or vertical positioning of the sign, and
- the amount of legend on the sign.

With the exception of ID-6 signs all ID signs should be checked for correct letter size by the method given in Section 7.10: *Letter Size and Type for Guide Signs.* A letter size less than the minimum specified in Section 7.1.4(g) should never be used.

Where two destinations are indicated on one sign they must both have the same letter size.

7.4.4 DESIGN AND LAYOUT

(a) DESTINATIONS

ID signs should not show more than two (2) destination names for each direction of travel. ID-6 signs show only one destination name.

All relevant place names shown on advance direction signs must be shown, to maintain route continuity and signing consistency.

Intermediate or minor places between an intersection and the next stage or destination is not normally indicated on ID signs, this information should be provided on confirmation direction signs - refer to Section 7.5 for confirmation direction sign details.

Where advance direction signing is not provided the destination names shown on ID signs should be chosen by the methods described in Section 7.2.4.

When destinations in different directions need to be shown added emphasis can often be obtained by offsetting each panel towards the direction indicated. Figure 7.4.1 illustrates a typical example of this type of sign layout.

FIGURE 7.4.1: A TYPICAL OFFSET ARRANGEMENT FOR INTERSECTION DIRECTION SIGNS

(b) ROUTE MARKER SYMBOLS

All direction indications for state highways must include a route marker symbol. This symbol is always positioned between the destination name and the direction arrow or the chevron indicator stripe.

(c) DISTANCES

Distances to destinations are not shown on ID signs at:

- state highway / state highway intersections, and
- state highway / major local road intersections.

Distance information in these situations is given on confirmation direction signs.

Destination and distance information may be shown on an ID sign when it is the only sign provided at an intersection. This situation is most likely to occur at:

- the intersection of a state highway and a minor local road, or
- the intersection of a local major road and a local minor road.

(d) STREET NAMES

In rural areas street names will normally be shown by a single freestanding sign.

When street names are added to the destination information on ID signs they should be shown on separate rectangular panels erected immediately above the ID sign. Typical examples of this sort of ID sign layout are shown in Figures 7.4.2, 7.4.5 7.4.6 and 7.4.7.

7.4.5 LOCATION

ID signs must be located at or near the intersection and they must be readily visible to approaching drivers. Their exact position will, however, depend on:

- roadside development,
- other signs in the area,
- visibility,
- the background, and
- the need to avoid restricting intersection sight distances.

Wherever possible ID signs should show the precise point of conflict with intersecting or entering traffic, especially when the layout of the intersecting roadways is not obvious.

A low mounted sign is not usually suitable as the primary ID sign at an intersection because it will often be hidden from the view of approaching drivers by other vehicles. A low mounted ID sign may however be suitable for a repeat sign located on the inside of a left turn.

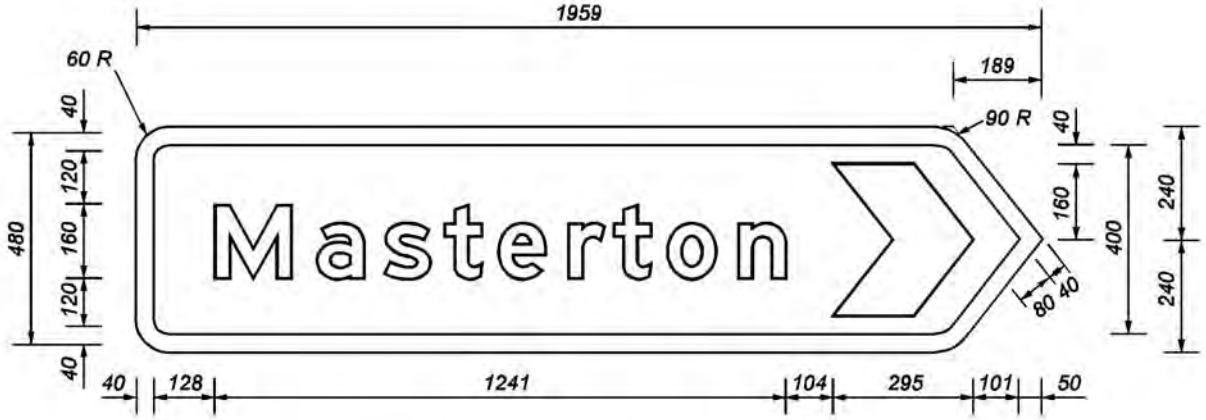
Signs which point down a side road should be placed at the top of the post and signs referring to the through road direction placed below them. A street name sign, when applicable, should be placed above the relevant direction sign.

Figure 7.4.2 shows a typical intersection direction sign assembly.

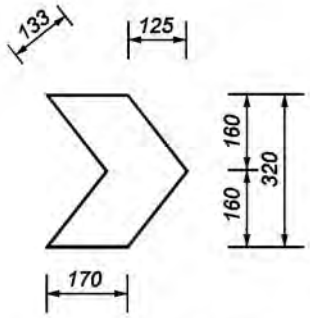
FIGURE 7.4.2: A TYPICAL LAYOUT SHOWING INTERSECTION DIRECTION SIGNS WITH STREET NAME PLATES

STATE HIGHWAY SIGN DETAILS

LEGEND	:	***Reflectorised white;***
		Series E mod., 160 mm caps, 120 mm l.c.
CHEVRON STRIPE	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised standard green***
BORDER	:	***Reflectorised white***



NOTE: Break sharp point with a 20 mm radius



CHEVRON STRIPE DETAILS

NOTES:

1. An ID-1 sign should be used w here the direction to the destination(s) indicated is approximately at right angles to the approaching driver.
2. A maximum of two and normally only one destination should normally be shown on an intersection direction sign.
3 When it is necessary to have a str eet name, it should be shown on a separate rectangular panel placed above the ID sign.
4. Distances to destinations may be shown when an ID sign is the only guide sign at an intersection, or when a CD sign is not provided on the side road. Distances *shall* be shown in the following manner:

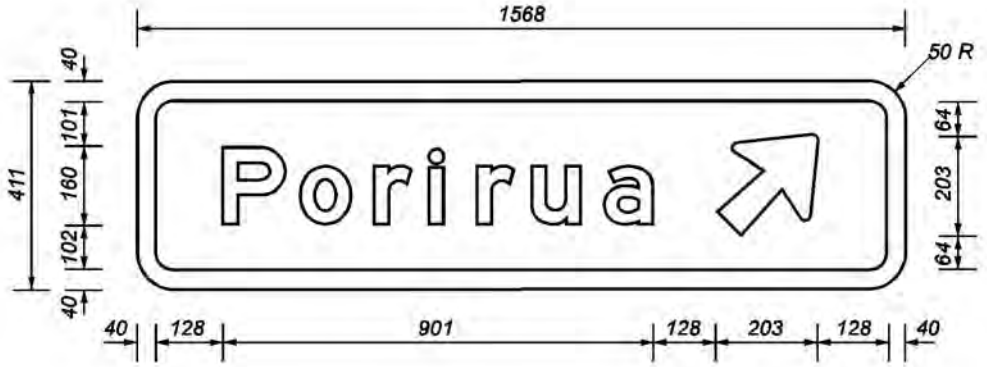
   Numbers: Modified SERIES E in the lettering size used for the destination name.

   Units: Modified SERIES E/lower case with a loop height approximately 66% of the size of the initial capitals used for the destination name and spaced 0.5 t imes the initial capital height from the number.

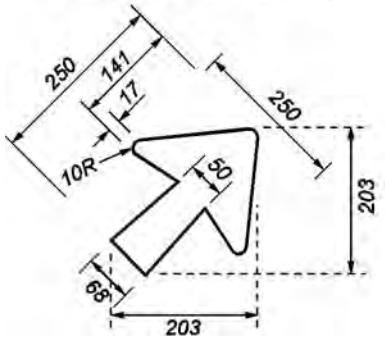
INTERSECTION DIRECTION SIGNS
TYPICAL ID - 1 SIGN DETAILS FIGURE 7.4.3

STATE HIGHWAY SIGN DETAILS

LEGEND	:	***Reflectorised white;***
		Series E mod. 160 mm caps, 120 mm l.c.
ARROW	:	***Reflectorised white; Type D***
BACKGROUND	:	***Reflectorised standard green***
BORDER	:	***Reflectorised white***



ARROW DETAILS : Type D



NOTES:

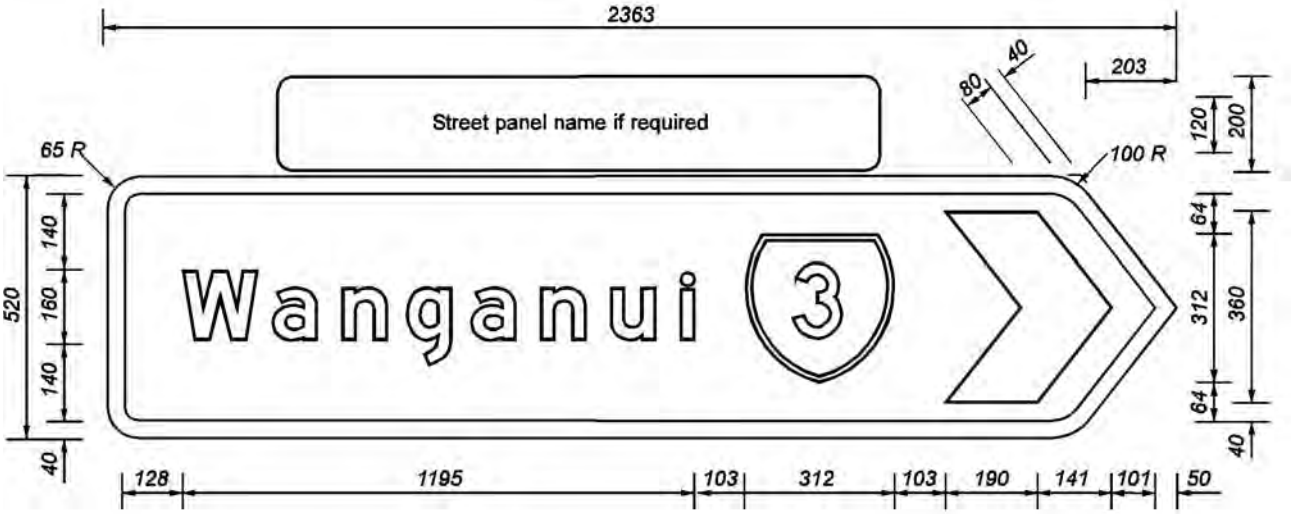
1. An ID-2 sign should be used where the direction to the destination(s) indicated is straight ahead, or angled away (up to approximately 45°) from the approaching driver.
2. A maximum of two and normally only one destination should normally be shown on an intersection direction sign.
3. Distances to destinations may be shown if an ID sign is the only guide sign at the intersection, or a CD sign is not provided on the side road.
4. When it is necessary to have a street name, it should be shown on a separate rectangular panel placed above the ID sign.

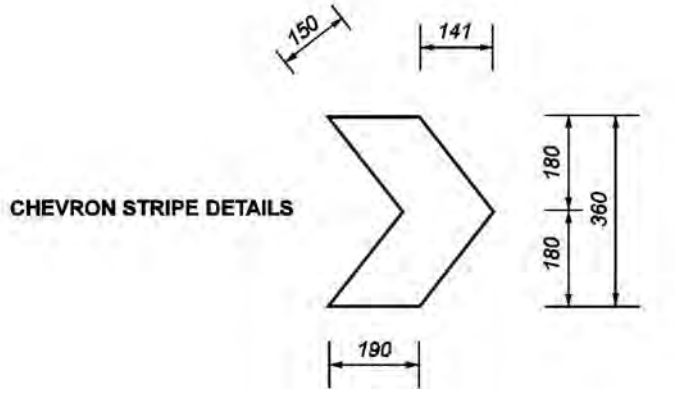
INTERSECTION DIRECTION SIGNS

FIGURE 7.4.4 TYPICAL ID - 2 SIGN DETAILS

STATE HIGHWAY SIGN DETAILS

LEGEND	:	***Reflectorised white; Series E mod., 160 mm caps, 120 mm l.c.***
STREET NAME	:	***Reflectorised white; Series D, 120 mm caps***
ROUTE MARKER SYMBOL		
LEGEND	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised red***
BORDER	:	***Reflectorised white***
CHEVRON STRIPE	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised standard green***
BORDER	:	***Reflectorised white***





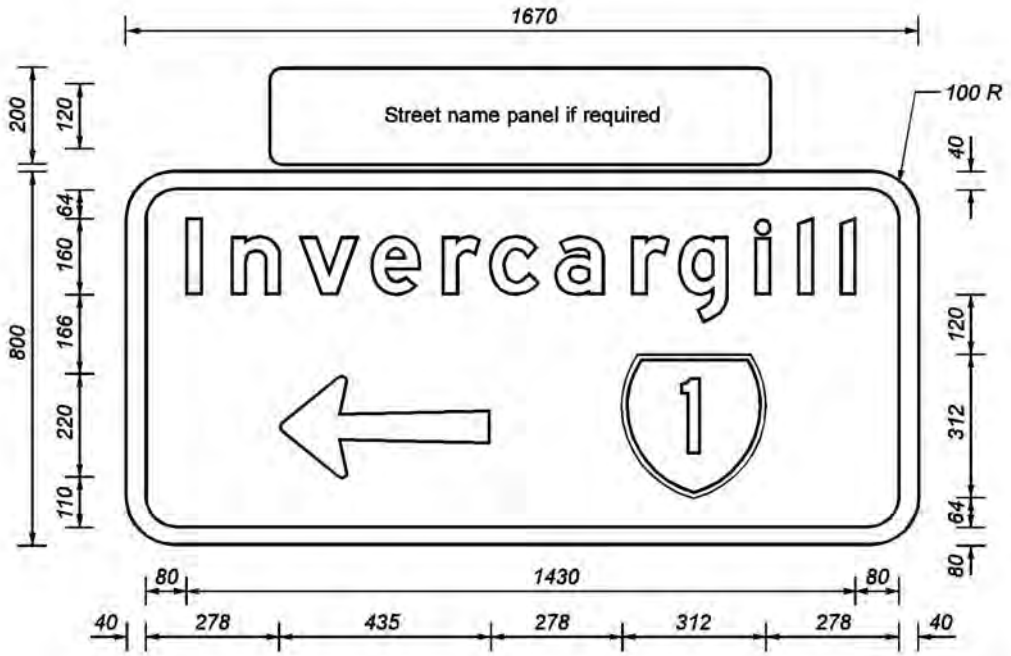
NOTES:

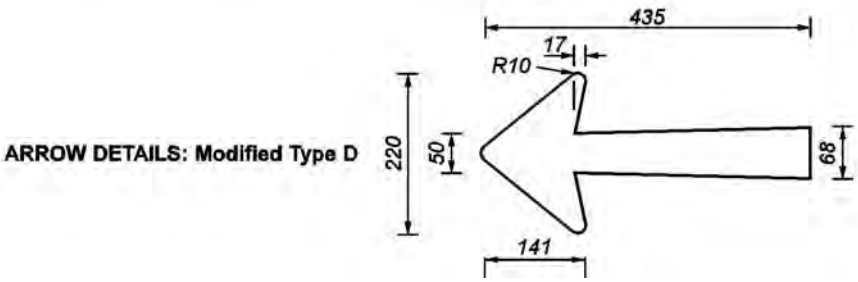
1. An ID-3 sign should be used where the direction to the destination(s) indicated on a marked route is approximately at right angles to the approaching driver.
2. A maximum of two and normally only one destination should normally be shown on an intersection direction sign.
3. Distances to destinations may be shown if an ID sign is the only guide sign at the intersection, or a CD sign is not provided on the side road.
4. When it is necessary to have a street name, it should be shown on a separate rectangular panel placed above the ID sign.

INTERSECTION DIRECTION SIGNS
TYPICAL ID - 3 SIGN DETAILS FIGURE 7.4.5

STATE HIGHWAY SIGN DETAILS

LEGEND	:	***Reflectorised white; Series E mod., 160 mm caps, 120 mm l.c.***
STREET NAME	:	***Reflectorised white; Series D, 120 mm caps***
ROUTE MARKER SYMBOL		
LEGEND	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised red***
BORDER	:	***Reflectorised white***
CHEVRON STRIPE	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised standard green***
BORDER	:	***Reflectorised white***





NOTES:

1. An ID-4 sign sho uld only be used at urban intersections where an ID-1, ID-2 or ID-3 sign canno t be located in the space available.
2. A maximum of two and normally only one destination should normally be shown on an intersection direction sign.
3. Distances to destinations may be shown if an ID sign is the only guide sign at the intersection, or a CD s ign is not provided on the side road.
4. When it is necessary to have a street name, it should be shown on a separate rectangular panel placed above the ID sign.

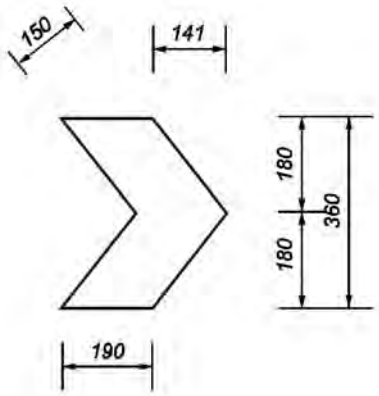
INTERSECTION DIRECTION SIGNS

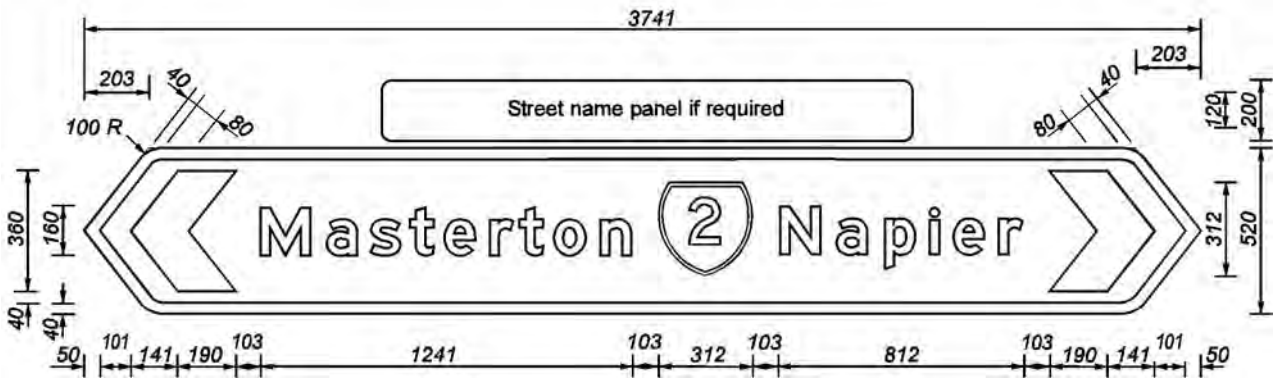
FIGURE 7.4.6 TYPICAL ID - 4 SIGN DETAILS

STATE HIGHWAY SIGN DETAILS

LEGEND	:	***Reflectorised white; Series E mod., 160 mm caps, 120 mm l.c.***
STREET NAME	:	***Reflectorised white; Series D, 120 mm caps***
ROUTE MARKER SYMBOL		
LEGEND	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised red***
BORDER	:	***Reflectorised white***
CHEVRON STRIPE	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised standard green***
BORDER	:	***Reflectorised white***

CHEVRON STRIPE DETAILS





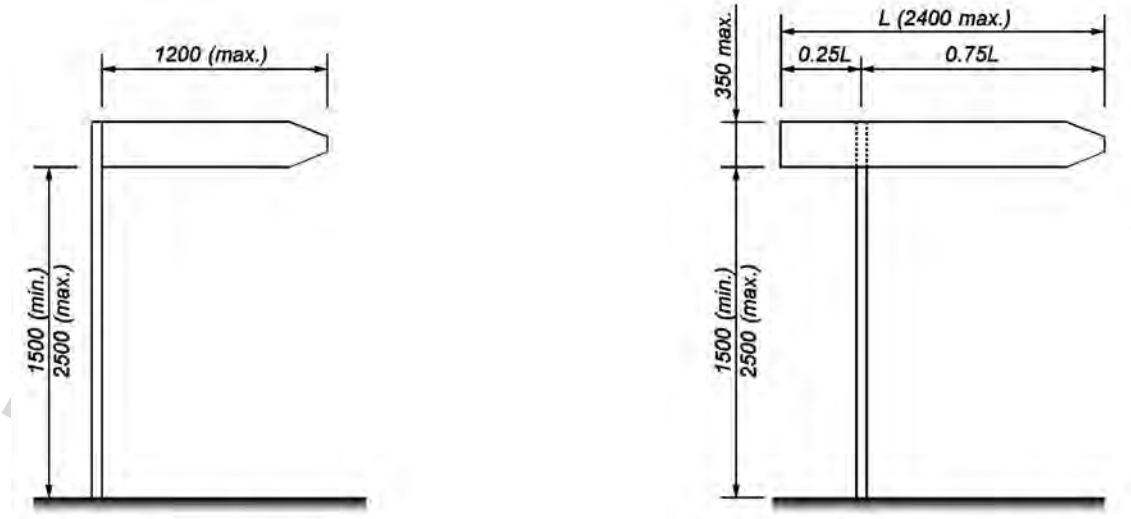
NOTES:

1. A maximum of two and normally only one destination should be shown in each direction on an ID-5 sign.
2. Distances to destinations may be shown if an ID sign is the only gui de sign at the intersection, or a CD sign is not provided on the side road.
3. When it is necessary to have a street name, it should be shown on a separate rectangular panel placed above the ID sign.

INTERSECTION DIRECTION SIGNS
TYPICAL ID - 5 SIGN DETAILS FIGURE 7.4.7

Typical sign dimensions

Depth of sign should be increased when two lines of text are necessary.



Single sign fixed to side of post

Double sign fixed to each side of post

Note: This sign on this page was previously labelled ID - 6, but has been changed to match that shown on page 10 - 14.

INTERSECTION DIRECTION SIGNS
FIGURE 7.4.8 TYPICAL IG - 12 *"Fingerboard"* SIGN DETAILS

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7.5 CONFIRMATION DIRECTION SIGNS

7.5.1 FUNCTION

Confirmation Direction (CD) signs are located beyond intersections or cities/towns to reassure road users that they are travelling towards their intended destination and the distance to it. Other places and the distances to them may also be indicated.

7.5.2 APPLICATION

CD signs must be provided on all state highways departing from state highway /state highway and state highway / major local road intersections.

CD signs should be provided on all roads departing from major local road / major local road intersections where advance direction and intersection direction signing is provided.

When there are two or more relatively closely spaced intersections, ie. not more than 1 km apart, or where a route changes direction through a series of intersections, the CD sign should be located after the last intersection. In these situations route markers must be erected just beyond each intermediate intersection to provide route confirmation.

Alternatively, where the above intersections are located in commercial areas, it is sometimes easier to locate the CD sign on the departure side of the city/town instead.

Repeater CD signs should also be provided about every hour of travel time along state highways to confirm to tourists the distance to the next town with services.

7.5.4* LETTERING

All lettering for stage and destination names is Modified Series E/lower case, with initial capitals.

Distance numerals are Modified Series E in the same size as the initial capitals of the destination or stage names.

The distance unit is Modified Series E/lower case lettering of approximately 88% of the adjacent numeral height, rounded to the nearest 5 mm. The spacing between numerals and the unit indicator should be 0.5 times the numeral height.

Lettering for additional directional or driving instructions, street names etc. must be in Series D or E CAPITALS, in the same size as the lower case letters of the destination names.

Letter size is dependent on:

- the speed of approaching vehicles,
- the lateral and/or vertical positioning of the sign, and
- the amount of legend on the sign.

All CD signs should be checked for correct letter size by the method given in Section 7.10: *Letter Size and Type for Guide Signs.* A letter size less than the minimum specified in Section 7.1.4(g) should never be used.

7.5.5 LEGEND

(a) GENERAL

A numbered route marker symbol heads the legend on state highway CD signs. A maximum of four (4) destinations may be shown, in order nearest to farthest along the road.

CD signs without route markers may show a maximum of five (5) destinations, in order as above.

The legend must include the next stage name, and relevant intermediate destinations previously shown on advance direction and intersection direction signs.

(b) ADDITIONAL DESTINATIONS

Additional destinations may also be shown, but only when:

- there is space available on the sign, and
- the additional destination names are able to be shown on all subsequent guide signing until those places are reached.

Additional destinations should be selected according to the following criteria:

(i) Places that have tourist, historic or geographic interest, or lie at the junction of a subsidiary route.

(ii) When the route joins another route, place names on both routes may be included, subject to the rules limiting the number of destinations that may be shown.

(iii) When a destination shown requires subsequent travel along another state highway, the route marker for that may be shown in brackets after the name.

(c) DISTANCES

Distances should be measured from the sign position to the recognized centre of each destination and given to the nearest whole kilometre.

7.5.6 LOCATION

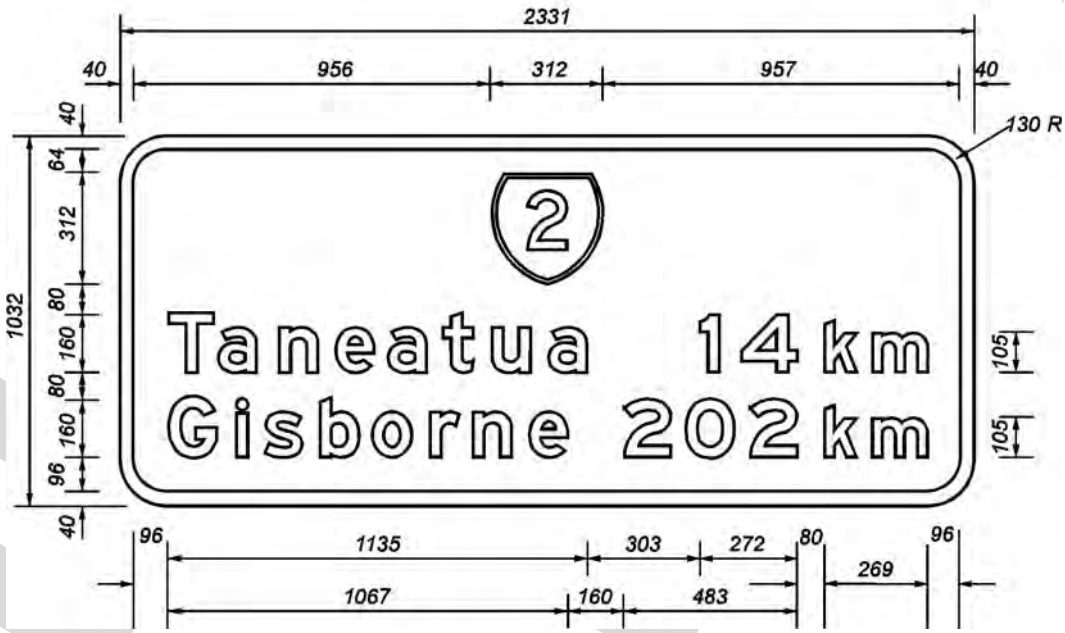
CD signs should be located on the left side of the road and approximately:

- 50 to 200 m beyond intersections in urban areas, and
- 400 m beyond intersections in rural areas.

(* Paragraph 7.5.3 deleted March 2010)

STATE HIGHWAY SIGN DETAILS

LEGEND	:	***Reflectorised white; Series E mod., 160 mm caps, 120 mm l.c. ('km' size as indicated)***
ROUTE MARKER SYMBOL		
LEGEND	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised red***
BORDER	:	***Reflectorised white***
BACKGROUND	:	***Reflectorised standard green***
BORDER	:	***Reflectorised white***



CONFIRMATION DIRECTION SIGNS
TYPICAL CD - 1 SIGN DETAILS FIGURE 7.5.1

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7.6 PLACE NAME AND THRESHOLD SIGNS

7.6.1 PLACE NAME SIGNS

(a) FUNCTION

Place Name (PN) signs should be used to indicate that a place shown on prior guide signing has been reached.

(b) APPLICATION

PN signs must be provided on the state highway approaches to all places shown on prior guide signing, unless there is another sign that clearly identifies the place, eg. a *"Welcome to _____"* sign.

PN signs should be provided on local road approaches to all places shown on prior guide signing.

(c) LETTERING

All lettering is Modified Series E/lower case, with initial capitals.

All PN signs should be checked for correct letter size by the method given in Section 7.10: *Letter Size and Type for Guide Signs.* A letter size less than the minimum specified in Section 7.1.4(g) should never be used.

(d) LOCATION

PN signs should be located on the left side of the road.

Drivers should have an uninterrupted view of the sign for a distance of at least 120 m in rural areas and 60 m in urban areas.

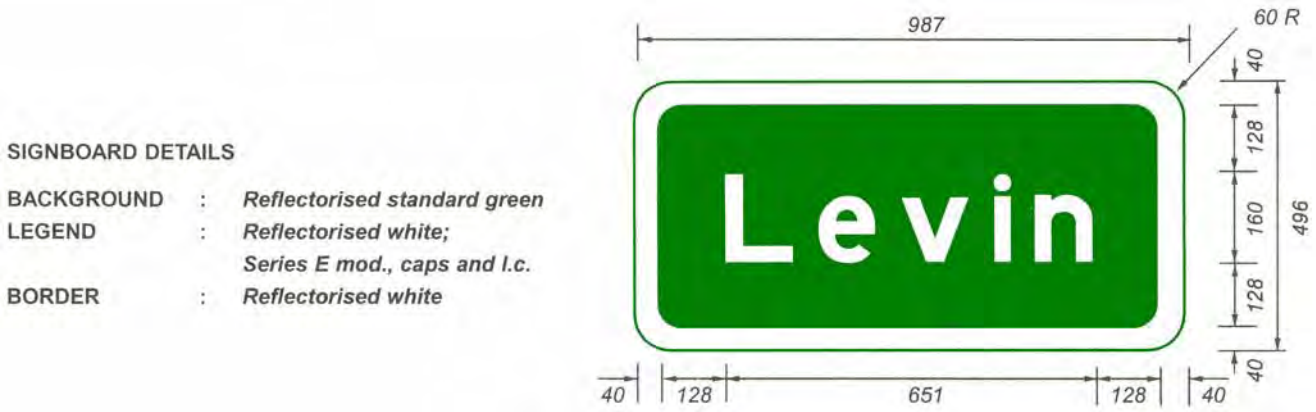


FIGURE 7.6.1: TYPICAL PN - 1 SIGN DETAILS

7.6.2 STATE HIGHWAY THRESHOLD SIGNS

(a) GENERAL

This policy sets out the guidelines for threshold signs to ensure their consistent application on state highways throughout New Zealand. As necessary, reference should be made to other sections of this manual (MOTSAM Part I) and Manual of Traffic Signs and Markings - Part II: Markings (MOTSAM Part II).

When entering a speed restricted area, ie. less than 100 km/h, an RG-1 speed limit sign must be erected on each side of the road, to inform drivers of the speed limit change. Where this change occurs at the entrance to a town a PN-1 place name sign is normally also provided, but erected separately from the RG-1 sign.

A threshold sign is a combination of a speed limit sign and a place name sign. These signs may be used in association with threshold treatments (refer to Section 2 below) on the approaches to speed restricted towns, to make drivers more aware of a speed restriction and the start of a lower speed environment.

To avoid duplicating information on the approaches to towns, existing PN-1 place name signs must be removed when threshold signs are installed.

(b) APPLICATION AND THRESHOLD TREATMENTS

To ensure threshold signs retain their effectiveness they shall only be used where there is a proven need to erect thresholds.

Threshold treatments alter the driver's perception of the road environment ahead and increase the effectiveness of speed limit reduction signing. Each threshold site design will vary depending on the combination of threshold treatments used, and must be designed specifically to suit its needs.

Refer to the Land Transport New Zealand publication *RTS 15: Guidelines for Rural Thresholds* for:

- determining when and where the threshold treatments should be used, and
- details of normal threshold treatments and their applications.

7.6.3 THRESHOLD SIGN CONFIGURATION

Figure 7.7.2 shows a typical state highway threshold sign layout.

(a) Layout

A threshold sign consists of a RG-1 speed limit disc and a place name displayed on a rectangular reflectorised sign plate (backing board).

No other message shall be shown on a threshold sign because it will effectively reduce its main function.

The speed limit disc must be positioned above the place name to make it more noticeable from a distance, and to ensure that drivers will be made aware of the speed limit before they read the place name, because signs are usually read from the top down.

The speed limit applying on the exit from the town should be shown on the reverse side of a threshold sign.

Figure 1 shows the details of a typical threshold sign layout. Other sign layout details should conform to the normal requirements for Guide Signs which are specified in Section 7.1 of this manual.

(b) Lettering

All place names must be shown in reflectorised white Modified Series E/lower case lettering, with initial capitals. Longer names should shown on one line in lettering of not less than 160 capital/120 lower case. Larger lettering may be used for short place names, to give a visually pleasing and balanced sign layout, but the letter size should never be greater than 240 capital/180 lower case.

General lettering details should comply with the requirements of Section 7.1 this manual.

(c) Colour

Threshold signs are considered to be guide signs and the standard state highway guide sign lettering and background colour conventions must be used in all situations.

(d). Speed Limit Disk

The speed limit is the main message on a threshold sign and a 1200 mm diameter speed disc should be used on rural threshold signs to emphasise this message.

A 50 mm wide reflective white border should be placed around its outside edge to emphasise the speed disc and to separate it from the sign background.

(e) Sign Support

Threshold signs should besupported in an appropriate fashion within the design of the threshold treatment.

Section 1.9.2 of this manualcontains the general sign support requirements.

(f) Mounting Height

Threshold signs should be mounted to ensure that the underside of the signs are at least 1.5m above the level of the adjacent roadway. Mounting heights may be increased, as appropriate, if driver sight distances to hazards are restricted. This is especially important for the sight distance of truck drivers. Refer to Sections 1.8 and 7.12 of this manual for further details on sign mounting height.

(g) Reflectorisation

All threshold signs must be fully reflectorised and comply with the requirements of Section 1.12 of this manual.

7.6.4 LOCATION

To enhance the threshold effect, threshold signs should be prominently displayed on both sides of the road and there should be no longitudinal offset between the two signs.

Threshold signs must normally be located within ±20 m of the legally defined positions for the RG-1 regulatory speed signs, and where approaching drivers have an uninterrupted view of them for at least 120m.

Threshold signs are generallylarger than other signs. Care should be taken to make sure that the signs do not obscure drivers' view of any other signs, or anyaccess located near the signs.

Where signs in their legallydefined position range are likely to obstruct turning traffic into nearby side roads or intersections, theyshould be relocatedbut the newlocations must be gazetted.

Sections 1.7 and 1.8 of This manual contain the details of sign location requirements.

7.6.5 LATERAL CLEARANCE

Threshold signs should be located as close as practicable to edge of the roadway, to enhance the narrowing effect of threshold treatments. However, the standard minimum lateral clearances between a sign and the edge of the trafficable carriageway, traffic lane or shoulder as applicable, must be provided in all cases.

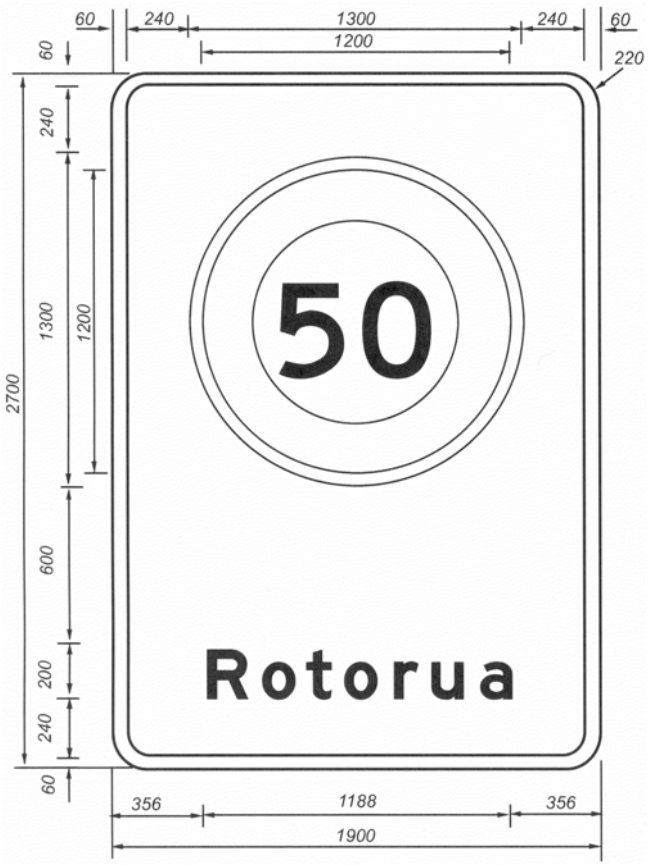
A minimum lateral clearance of 10.5 metres between signs must also be provided on state highways, for the passage of over dimension vehicles, ie. the inner edge of threshold signs should be located at least 5.25 m from the road centre line. This lateral clearance is adequate for most over dimension vehicles, but will not cater for extreme cases.

Where no alternative route is available for extreme over dimension vehicles threshold signs must be readily demountable or have a swivel mechanism to rotate the signs through 90 degrees, to increase the clear distance between signs and enable these vehicles to pass through the threshold treatment.

A 3.5-m lane width is normally necessary to maintain standard lateral clearance between vehicles in adjacent lanes. Lane width may however be reduced to 3.0 m at threshold treatments, to enhance their visual narrowing effect. This may be achieved by providing a 1.0 m wide painted central median centred on the existing road centreline and reducing the standard lane width by 0.5 m.

Reflective raised pavement markers (RRPMs) may be placed on the painted median to maintain the visual constraint at nights, and especially when the pavement is wet.

Figure 7.7.3.shows lateral clearance requirements.



STATE HIGHWAY SIGN DETAILS

BACKGROUND	:	***reflectorised green***
BORDER	:	***reflectorised white***
LEGEND	:	***reflectorised white, Modified Series E, 200 Capitals, 150 lower case***

RG - 1 SPEED LIMIT SIGN	:	**Legend**	:	***black***
		Background	:	***reflectorised white***
		Roundel	:	***reflectorised red***

NOTES:

1. A threshold sign is approximately 2700 mm high and 1900 mm wide.
2. All primary place names should normally be fitted onto one line within this width by reducing letter size. Letter height must not, however, be made less than 160 mm in rural areas.
3. Edge spaces should be made approximately 0.6 times the height of the numerals used on the RG - 1 speed limit sign.

TYPICAL PN - 2 THRESHOLD SIGN DETAILS FIGURE 7.6.2

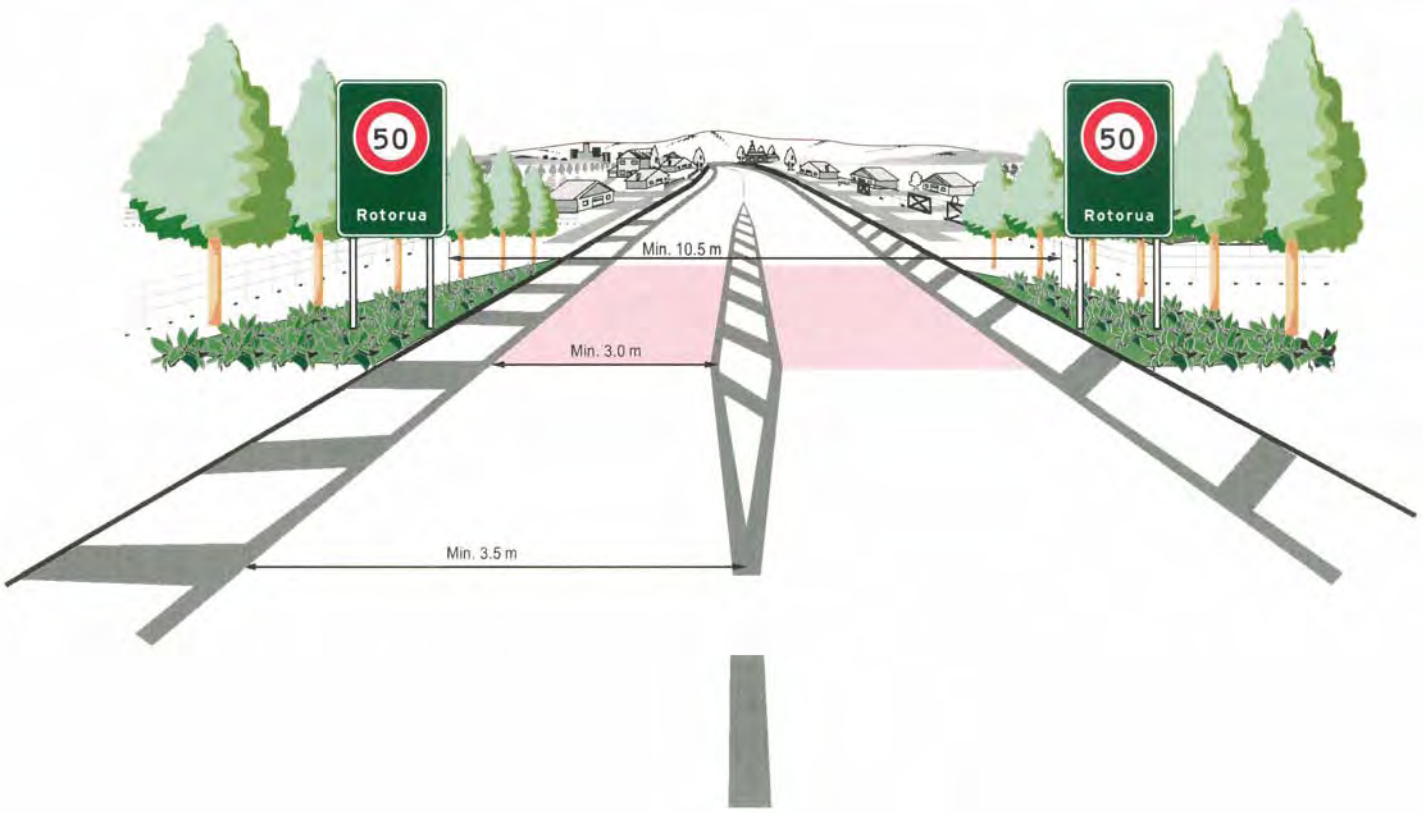


FIGURE 7.6.3 TYPICAL PN - 2 THRESHOLD SIGN LAYOUT

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7.6(cont) STREET NAME SIGNS

7.6.6 FUNCTION

Street Name (SN) signs may sometimes be used to enhance the information given on guide signs at important intersections but their main use is at minor intersections where the traffic volumes leaving or entering the main route are low and normal guide signing is not warranted.

7.6.7 SIGN DETAILS

(a) GENERAL

Street names are not normally shown on state highway guide signs. When it is considered necessary to add the name of an important road it may be shown as:

- an additional street name sign plate erected above the sign, or
- a coloured insert panel which is positioned on the sign and immediately above the destination name.

Street name signs should normally conform to the Land Transport New Zealand guideline for street name signs - *RTS 2: Guidelines for Street Name Signs*.

Street name signs should be rectangular in shape with their long axis horizontal. They may be shaped to a point at one or both ends to indicate the direction or directions to be followed. A white border may be used.

(b) RURAL ROADS

Rural state highway signs must be fully reflectorised and have a white legend on an AS 1906 - 1992 Blue background. Lettering should be 120 mm Series D CAPITALS, with a medium spacing.

NOTE: If for sign visibility or intersection conspicuity reasons the sign needs to be larger than normal, then 160 mm modified series E lettering should be used. In such cases, a chevron arrow such as shown in figure 7.4.3 can be helpful.

(c) URBAN ROADS

Urban street name signs should be reflectorised and desirably have a white legend on an AS 1906 - 1992 Blue background. Lettering should be at least 100 mm Series D CAPITALS, with a medium spacing.

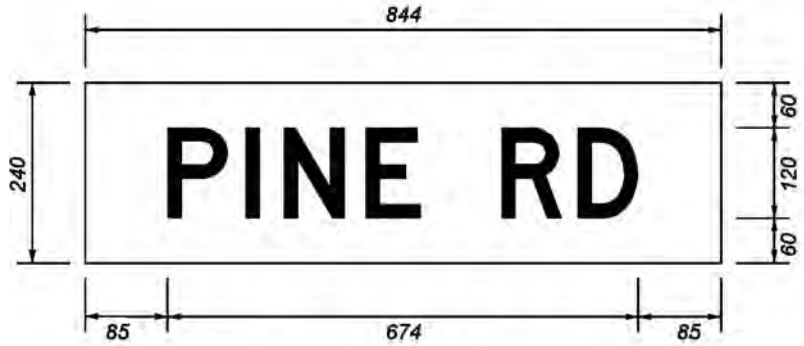
Where an urban local authority has adopted a different colour scheme for their street name signs the local colour scheme should be used for street names on state highway guide signs.

7.6.8 LOCATION

Street name signs must be located where they are readily visible to approaching drivers. Each site needs to be treated on its merits and installation will depend on roadside development, other signs in the area, visibility and background. Refer to RTS 2 for more details and recommended sign locations.

LEGEND : *Reflectorised white*
BACKGROUND : *Reflectorised blue*

LEGEND : *Reflectorised white*
BACKGROUND : *Reflectorised blue*

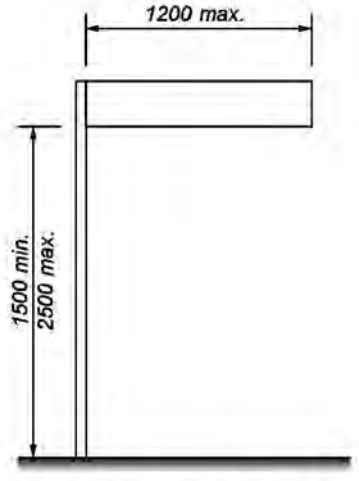


LETTERS : *120 mm Series D medium spacing*

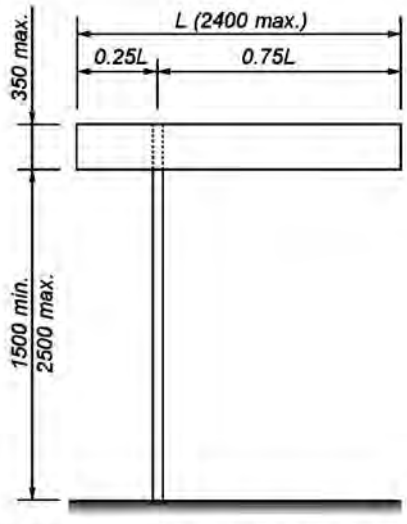
Typical sign dimensions

LETTERS : *60 mm Series D narrow spacing*

NO EXIT sign dimensions (affixed directly below road sign)



Single sign fixed to side of post



Double sign fixed to each side of post

STREET NAME SIGNS
TYPICAL SN - 1 SIGN DETAILS FIGURE 7.6.4

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7.7 DUAL NAME SIGNS

7.7.1 GENERAL

This policy sets out the requirements for the signing of Dual Names on state highways, and must be read in conjunction with relevant sections of Manual of Traffic Signs and Markings (MOTSAM), Part 1.

Only those places and features that have been accorded official dual name status by the New Zealand Geographic Board (NZGB) may be shown on state highway signs.

Dual names may be shown on:

- Guide signs,
- Tourist signs, and
- General information signs.

Application of the principles and details specified in this policy will ensure the consistent addition of dual names on state highway traffic signs throughout New Zealand.

7.7.2 DUAL NAMING CONVENTION

(a) The NZGB convention for identifying dual names is to show the primary name separated from the secondary name with a "/" character, ie.

Primary name / Secondary name

NOTE: The name sequence is set by NZGB as part of the dual name determination process and cannot be changed for traffic signing purposes.

(b) It is not often possible to show dual names on traffic signs in the NZGB format, even for two short names. The method adopted by Transit to show dual names on traffic signs is to:

- show the primary name in the standard manner and lettering style generally used for that type of sign,
- show the secondary name in *italic CAPITAL* lettering 0.75 times the size of the initial capitals used for the primary name,
- position the secondary name immediately beneath, and horizontally centred on, the primary name.

This method groups the names but distinguishes the primary name from the secondary name and also limits increases in sign size.

(c) Where a secondary name is longer than a primary name, its letter size should be reduced to make its length approximately equal to that of the primary name.

The absolute minimum letter sizes that can be used for secondary names are:

- **Guide signs:** 120 Modified Series E with medium letter spacing.
- **Tourist signs:** 100 Series D with medium letter spacing.

(d) When letter size reduction cannot limit the length of a secondary name sufficiently one of the following alternative methods may be employed:

(i) The secondary name may be shown on two lines, if it can be conveniently split in a manner approved by the local Maori groups. The vertical spacing between the two lines should be 0.5 times the capital letter size of the lettering used for the secondary name.

(ii) The primary name may be centred horizontally above the secondary name which is shown in the minimum permissible lettering size. If necessary, the sign size must be adjusted to accommodate the longest name shown on the sign and to retain the standard edge, symbol, direction arrow spacings and edge clearances.

NOTES:

1. ***The symbols, route markers and distance information associated with a dual name must be vertically centred on the dual name group.***

2. ***The longest name on a sign, primary or secondary, will determine overall sign width.***

3. ***Maori names need to be checked for their correct wording with the Maori organization which has mana whenua status in the area the sign is to be erected. This is particularly important when showing longer names on two lines because the inappropriate breaking of these can alter their meaning and/or interpretation.***

4. ***Maori names may use macrons. All Maori names must be checked with the NZGB for correct presentation. When necessary macrons should span the full width of a lower case letter, half the width of capital letter and be half the lettering stroke width in thickness.***

5. ***The length of a macron over the letter 'I' should be the same as that used for the other vowels.***

7.7.3 DUAL NAME GUIDE SIGNS

The guidelines below are to be read in conjunction with those outlined in sections 7.1 to 7.5 of this Manual

(a) LEGEND

When dual names are added to existing guide signs the number of destinations currently shown may have to be reduced, to keep the amount of destination information shown within the normal maximum allowed. This is essential because it will:

- ensure driver's will be able to read, understand and react to the sign message,
- reduce unnecessary increases in the size of sign panels, and
- generally give a more visually pleasing and balanced sign layout.

Dual names are considered to be two separate names. When dual names are to be shown on existing signs, excess destination name(s) should be removed in the following manner.

(i) Advance Direction (AD) Signs

All relevant stage names must be shown on AD signs.

Generally, no more than two place names should be shown in any one direction of travel. Therefore, when a dual name is to be shown only one destination may be shown in that direction.

Similarly, when a stage name is a dual name no other destination may be shown in that direction.

When a dual name is to be shown on an existing AD sign that has more than one destination in that direction, the relevant Local Authorities need to be consulted to advise which is the most important destination and which name is to be removed.

Refer to Section 7.2.4 of MOTSAM (Part 1) for full details of determining the legend for AD signs.

(ii) Intersection Direction (I D) Signs

Any place names removed from AD signs must be also removed from the associated ID signs.

Generally, no more than two place names should be shown in any direction of travel. Therefore, when a dual name is to be shown only one destination may be shown in that direction.

Similarly, if a stage name is a dual name no other destination may be shown in that direction.

When a dual name is to be shown on an existing ID sign that has more than one destination in that direction, the relevant Local Authorities need to be consulted to advise which is the most important destination and which name is to be removed.

Refer to Section 7.4.4 of MOTSAM (Part 1) for full details of determining the legend for ID guide signs.

(iii) Confirmation Direction (C D) Signs

Place name(s) removed from AD and ID signs may however remain on CD signs, provided the maximum number of names allowed on this type of sign is not exceeded. Refer to section 7.5.5 of MOTSAM (Part 1) for the full details of the legend including the limitation on number of destinations to be shown on CD signs.

NOTE: Stage names cannot not be removed from any guide sign for the purpose of limiting sign size.

Typical examples of dual name guide signs are shown in figures 7.7.1 to 7.7.3.

(b) LETTERING STYLE AND SIZE

All primary place names are shown in Modified Series E/lower case lettering, with initial capitals.

Secondary place names shall be shown in Modified Series E *italic CAPITAL* lettering of the same size as the lower case letters used for the primary place name, ie. 75% of the height of the capital letters used for the primary name. The slope of Italic lettering should be between 8 and 10 degrees from the vertical.

NOTE: The primary name on an ID-6 sign is shown in Series D lettering. The secondary name should be shown in Series D ITALIC lettering 0.75 times the size of the primary name lettering.

The lettering size on traffic signs is dependent on:

- the speed of the approaching vehicle,
- the lateral and/or vertical position of the sign, and
- the amount of legend on the sign.

Refer to Section 7.1.4 (g)of MOTSAM (Part 1) for the minimum letter sizes to be used for signs on different types of roads.

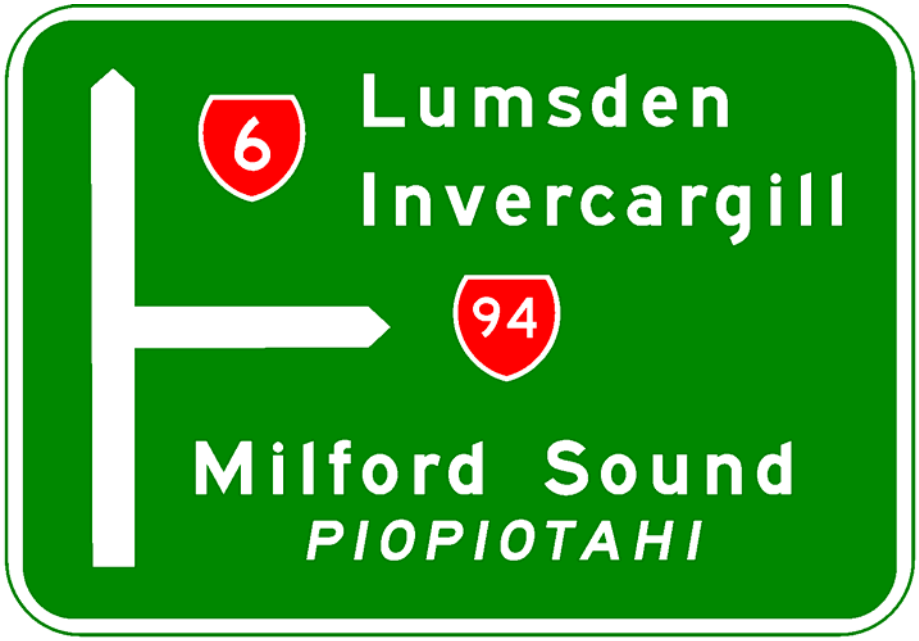
All primary names on guide signs should be checked for correct letter size by the method given in Section 7.10: *Letter Size and Type for Guide Signs, of* MOTSAM (Part 1). A letter size less than the minimum specified in Section 7.1.4(g) of MOTSAM (Part 1) should never be used, except for secondary names which should conform to the minimum sizes specified in Section 7.7.2.

(c) LETTERING LAYOUT

Refer to Section 7.1.4 (r) of MOTSAM (Part 1) for guide sign layout details.

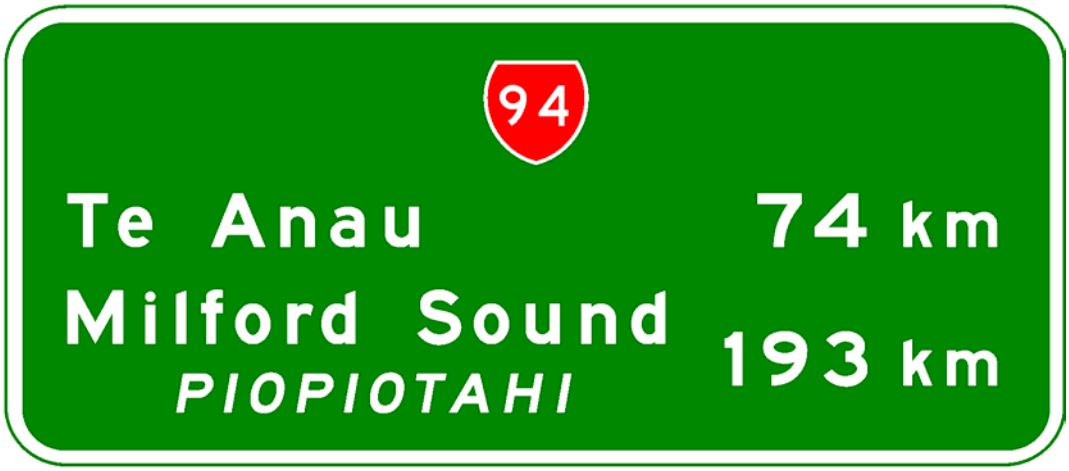
The vertical spacing between dual place names should be:

- not less than 0.5 times the size of capital lettering used for the secondary name, and
- at least 0.75 times the size of capital lettering used for the secondary name when:
  - the upper line contains lower case letters which include descenders, or
  - increased clarity or definition is required.



a) A TYPICAL DUAL NAME AD-4 TYPE ADVANCE DIRECTION SIGN

b) A TYPICAL DUAL NAME ID-3 TYPE INTERSECTION DIRECTION SIGN



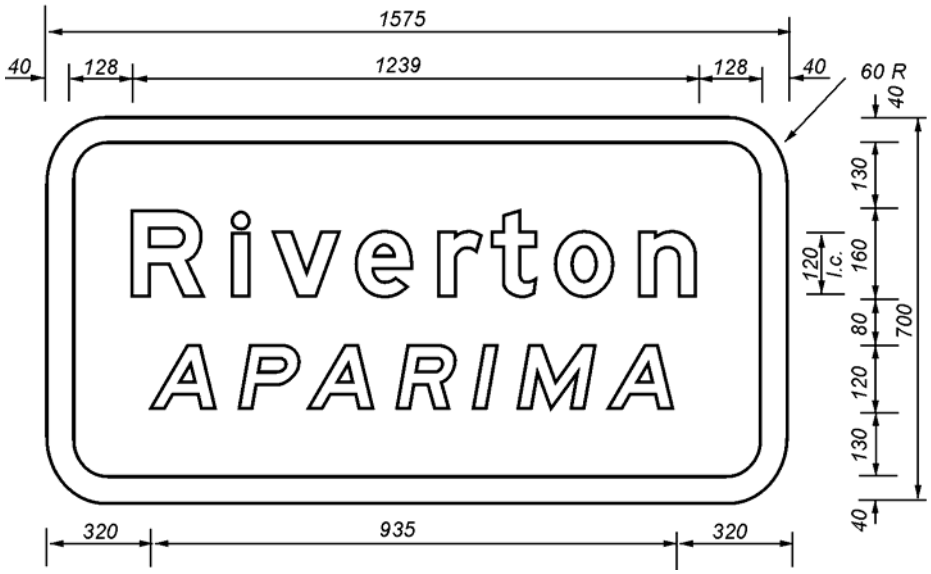
c) A TYPICAL DUAL NAME CD-1TYPE CONFIRMATION DIRECTION SIGN

FIGURE 7.7.1 TYPICAL DUAL NAME GUIDE SIGNS

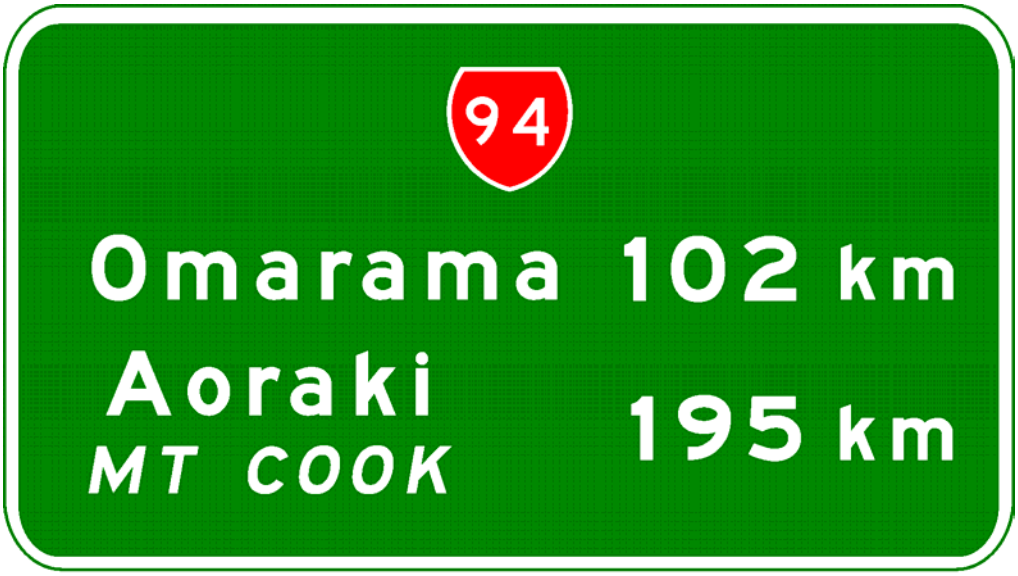
a) A TYPICAL DUAL NAME PN-1 TYPE PLACE NAME SIGN

SIGNBOARD DETAILS

BACKGROUND	:	***Reflectorised standard green***
LEGEND	:	***Reflectorised white;***
		Primary Name : Series E mod., caps and l.c
		Secondary Name : Series E mod caps, Italics (Approx. 9 degrees).
BORDER	:	***Reflectorised white***



A TYPICAL DUAL NAME PN - 1 PLACE NAME SIGN FIGURE 7.7.2



a) A TYPICAL DUAL NAME CD-1 TYPE CONFIRMATION DIRECTION SIGN

FIGURE 7.7.3 A TYPICAL DUAL NAME CD - 1 CONFIRMATION SIGN (Secondary name is longer than primary name)

7.8 ROUTE MARKER SIGNS

7.8.1 GENERAL

Route identification, by means of a route numbering system and distinctively shaped and/or coloured route markers, is a very important aid to driver navigation.

Routes may be identified by using:

- free-standing signs located at regular intervals along a road, to reassure drivers that they are following the correct route, and
- route identification symbols on guide signs to supplement directional text information.

Route identification systems are only effective if:

- routes are numbered throughout without any gaps,
- the signs are maintained in good condition, and
- the route numbers are shown on road maps which are freely available to the public.

It is important therefore that there are as few changes as possible after a route numbering system is established, so that road maps are not outdated too soon.

A route numbering system has been implemented for New Zealand state highways and Route Marker (RM) Signs are used to identify these routes.

Route marking is also important on local authority roads which form part of an urban route system. A recommended system for marking urban routes is given in Section 7.9 of this Manual: *Urban Route System Signs.*

7.8.2 APPLICATION

(a) STATE HIGHWAYS

(i) Colour:

State highway route marker signs have reflectorised white numbers, letters and borders on a red reflectorised background.

(ii) Free Standing Route Markers:

Free standing RM-1 or RM-2 route marker signs must be erected on the left side of all state highways at:

- intervals not exceeding 15 km, and
- approximately 400 m past the more important rural intersections where confirmation direction signs are not warranted.

These signs are detailed in Figures 7.8.1 and 7.8.2.

(iii) State Highway STARTS / ENDS Signs:

RM-3 and RM-4 signs must be erected where a state highway starts or ends at a place that is not an intersection with another state highway.

These signs are detailed in Figure 7.8.3 and are erected on the left side of the road close to the point where the state highway starts and ends.

RM-3 and RM-4 should be located so that drivers have an uninterrupted view of them for at least 120 m in rural areas and 60 m in urban areas.

(iv) Legend

All lettering and numerals on state highway route marker signs must be in Series D CAPITALS.

(v) Sign Size:

State highway route markers are detailed in Figures 7.8.1, 7.8.2 and 7.8.3. While these signs are suitable for use in most situations larger signs should be used on high speed and multi-lane roads.

(vi) Route Marker Symbols on Guide Signs:

Where a route marker symbol forms part of the legend on a state highway guide sign the symbol is proportioned in relation to the size of the route number. The route number size is determined in the following manner:

1. An RM-1 symbol number is the same height as the initial capital letters used for the associated destination name. Suffix lettering is 0.5 times the numeral height.

2. An RM-2 symbol number is 0.75 times the height of the initial capital letters used for the associated destination name. Suffix lettering is 0.5 times the initial capital letters of the associated destination name.

(b) URBAN ROUTES

Section 7.9 of this Manual describes a system for marking urban routes which was developed by the Auckland Regional Council and is endorsed by the NZTA.
Brief details of the AS 1743: 1992 signs used in this system are:

(i) Route Marker:

The G8-1-1 route marker shield.

(ii) Supplementary Plates:

The supplementary direction indicator plates G8-2-1 to G8-2-5 and the G8-2-6 "END" plate should be used.

(iii) Colour:

Urban route shields should have black legend, arrows and borders on reflectorised white backgrounds.

(iv) Numerals:

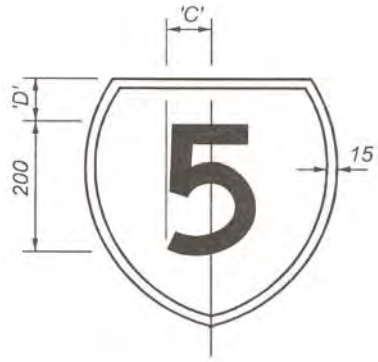
Numerals should be 180 mm or 240 mm Series C. Series E numerals may be used for single numbers to enhance legibility.

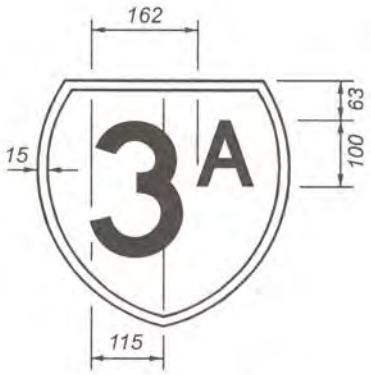
(v) Legend:

100 mm or 130 mm Series C lettering should be used.

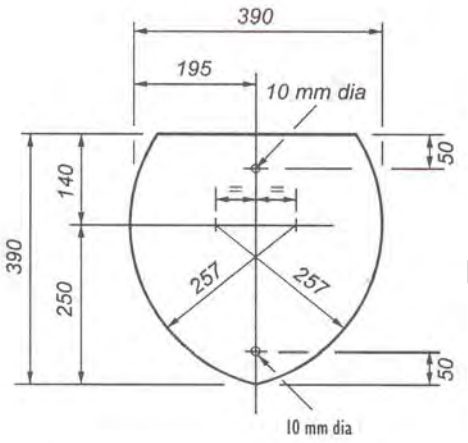
SIGN DETAILS

BACKGROUND : *Reflectorised red*
LEGEND : *Reflectorised white*
BORDER : *Reflectorised white*





NUMERALS : *200 mm Series D*
LETTER 'A' : *100 mm Series D*



DETAIL OF SHEET ALUMINIUM BLANK

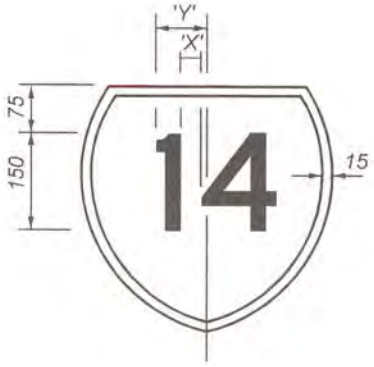
Numerals

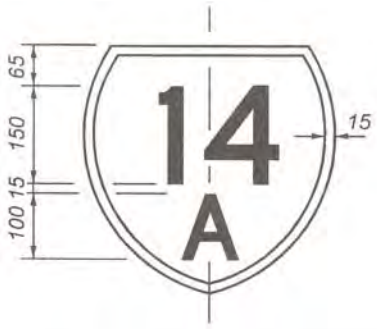
	1	2	3	4	5	6	7	8	9
'C'	33	67	67	91	67	67	67	67	67
'D'	75	63	63	75	63	63	75	63	75

STATE HIGHWAY ROUTE MARKER SIGNS
FIGURE 7.8.1 RM - 1 SIGN AND SYMBOL DETAILS

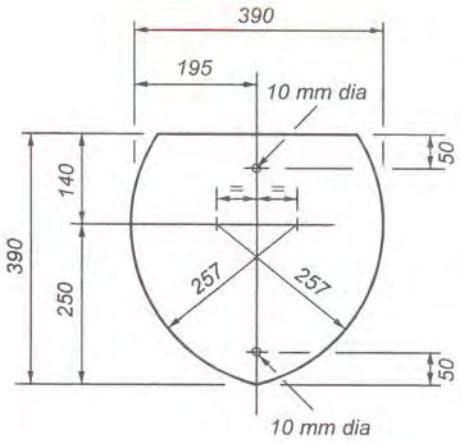
SIGN DETAILS

Background : *Reflectorised red*
Legend : *Reflectorised white*
Border : *Reflectorised white*





NUMERALS : *150 mm Series D*
LETTER 'A' : *100 mm Series D*



DETAIL OF SHEET ALUMINIUM BLANK

2nd Numeral

1st Numeral	0	1	2	3	4	5	6	7	8	9
1	34	50	34	34	34	34	34	34	34	34
2	28	34	28	28	22	34	34	28	28	28
3	28	34	28	28	28	28	28	22	28	28
4	34	34	31	28	22	28	34	28	34	34
5	34	34	34	34	28	34	34	28	34	34
6	28	34	28	28	28	34	28	28	28	28
7	28	34	28	28	22	28	28	41	28	28
8	28	34	28	28	28	34	28	28	28	28
9	28	47	28	28	28	34	28	28	28	28

Dimension 'X'

2nd Numeral

1st Numeral	0	1	2	3	4	5	6	7	8	9
1	88	66	86	86	80	86	86	83	86	86
2	117	100	114	114	113	117	117	114	114	114
3	117	97	114	114	113	114	114	117	114	114
4	112	109	128	125	125	119	113	119	125	113
5	117	94	117	117	113	117	114	117	114	114
6	117	94	114	114	119	117	114	114	114	114
7	117	100	119	114	116	114	114	122	114	114
8	117	97	114	114	117	117	114	114	114	114
9	117	103	114	114	116	117	114	114	114	114

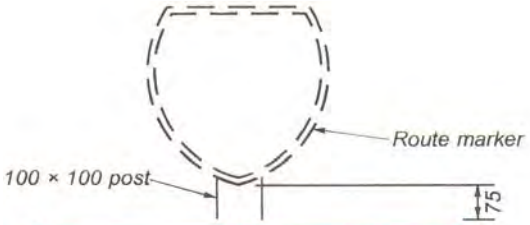
Dimension 'Y'

STATE HIGHWAY ROUTE MARKER SIGNS
RM - 2 SIGN AND SYMBOL DETAILS FIGURE 7.8.2

SIGN DETAILS

BACKGROUND	:	*Reflectorised red*
LEGEND	:	*Reflectorised white*
BORDER	:	*Reflectorised white*
LETTERING		
URBAN	:	*Series D; 120 mm; medium spacing*
RURAL	:	*Series D; 160 mm; medium spacing*

(a) RM-3 SIGN



(c) ROUTE BEGINS/ENDS SIGN ASSEMBLY

(b) RM-4 SIGN

FIGURE 7.8.3 STATE HIGHWAY ROUTE MARKER SIGNS ROUTE BEGINS OR ENDS SIGN DETAILS

7.9 URBAN ROUTE SYSTEM SIGNS

7.9.1 GENERAL

Urban route systems assist motorists to move from one part of a city or region to another, subject to the following constraints:

- Local users are expected to have some knowledge of the city or region while strangers will need to obtain a street map and study it.
- Urban route systems will not necessarily guide motorists right to their desired destination. It will generally be necessary to refer to a detailed street map once the general location of the destination is reached.

7.9.2 USE

Urban Route Marker Signs should be used in accordance with the following principles:

(a) Minimise the number of roads involved. A reasonable, easily followed route should be the main selection criteria rather than the fastest or 'best' route.

(b) Place names should be signed (where appropriate) at intersections of urban routes and where a departure from an urban route is required.

(c) Place names should chosen on the basis of places which are shown on most road maps and will be recognisable to many people. It may however not always be possible to showplace names on all legs of a signed intersection.

(d) Route number signs should be used to identify an urban route between major intersections.

(e) A combination of routenumbers and place names will generally provide guidance for motorists.

(f) Urban route numbers may be added to state highway and motorway signs where appropriate.

(g) Urban route numbers should avoid the numbers used for state highways in the region.

(h) Where an existing route numbering system is to be upgraded or revised, the new system should retain as many of the existing route numbers as possible.

7.9.3 FORMAT

Three types of signs used for the urban route system:

- Guidance route number shields and supplementary arrow boards which provide advance warning of the various urban routes, particularly prior to intersections,
- Reassurance route number shields and arrows which assure the motorist that they are travelling on the correct route, and
- Advance direction guide signs which are located prior to important intersections and include the appropriate numbered shield.

7.9.4 ROUTE NUMBER SHIELDS

Routes should be identified by shields which have black numbers and borders on reflectorised white backgrounds.

When erected as an individual sign shields should be either:

- 310 mm × 360 mm, or
- 410 mm × 480 mm

Series C numerals are normally used but when only one number is displayed a Series E numeral should be used. The numeral size used at a particular location will depend on local conditions.

It may also be necessary to increase shield sizes on some signs, eg. overhead motorway gantry signs.

7.9.5 ARROW BOARDS AND 'END' SIGNS

The direction of arrows shown on supplementary direction indication plates will depend on the road or intersection geometry. Typical examples are shown in Figure 7.9.2.

At the end of a route the 'END' sign should be displayed.

Supplementary plates and the 'END' sign have black legends and borders on reflectorised white backgrounds.

7.9.6 ADVANCE WARNING SIGNS

Refer to Figure 7.2.1. The appropriate route number shield is inserted between the place name (destination) and the direction arrow. The size of the shield is adjusted so that the numeral is the same height as the initial capital letters used for the associated destination name. The route number shield may be an Urban Route Number sign or a State Highway Route Marker sign.

7.9.7 LOCATION OF SIGNS

(a) GUIDANCE ROUTE NUMBER SHIELDS AND ARROWS

These signs should be erected:

- in advance of the intersection of two or more numbered routes,
- in advance of an intersection where a numbered route turns,
- in advance of an intersection where the surface of the route changes markedly, eg. sealed to unsealed,
- in advance of the intersection of a numbered route with an important road and
- where desirable, on important road approaches to intersections with numbered routes.

Route shields should also be incorporated into advance direction signs for the intersections of numbered routes and major roads.

(b) REASSURANCE ROUTE NUMBER SHIELDS

These signs are generally a free standing route number shield and they should be located in the following manner:

- beyond all intersections of two or more numbered routes,
- beyond all intersections of a numbered route with an important road where guidance route number shields have been erected at the intersection,
- where considered necessary, beyond all intersections with important roads where guidance route number shields have not been at the intersection,
- at all other locations where reassurance is considered to be desirable.

7.9.8 SIGN ASSEMBLIES

Route number signs should be located on the left side of the road except in special cases such as channelised intersections.

Where a number of shields and arrows are to be placed at one location and face in one direction they should be erected on one post in the following manner:

- two shields with arrows should be placed one above the other,
- three or five shields with arrows should be placed with one of them in a central position, and
- the general arrangement should indicate the geometric layout of the intersection ahead.

Examples are shown in Figure 7.9.3.

If the intersection includes a state highway on one or more of its approaches the appropriate state highway route marker shield should be used with a supplementary arrow.

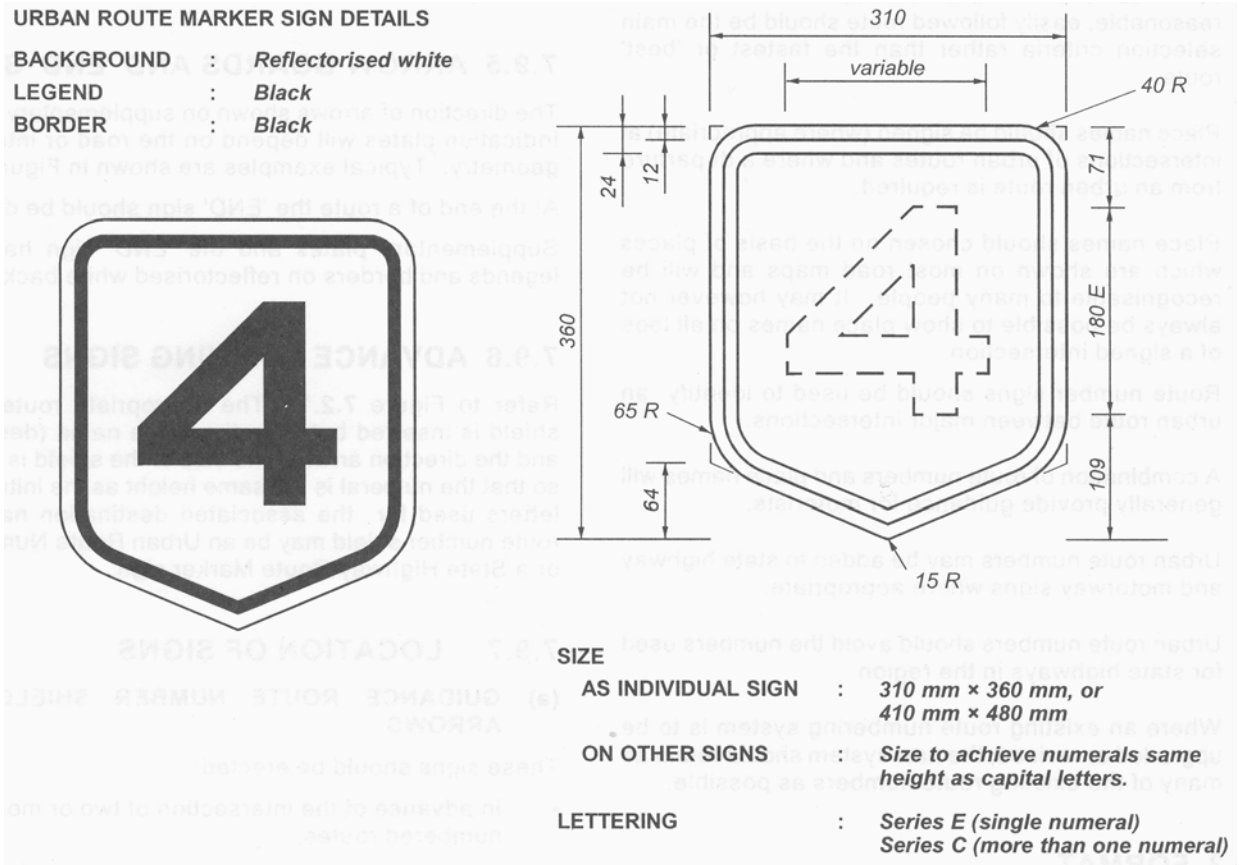
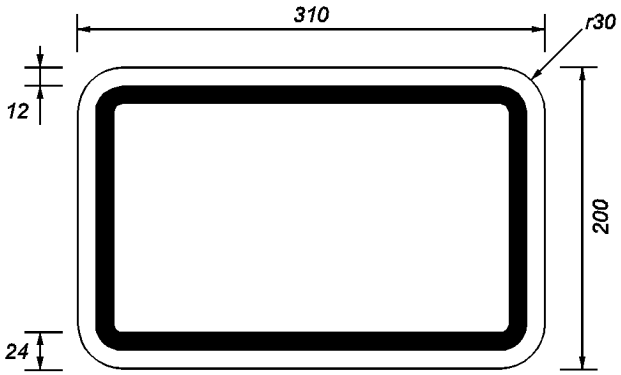


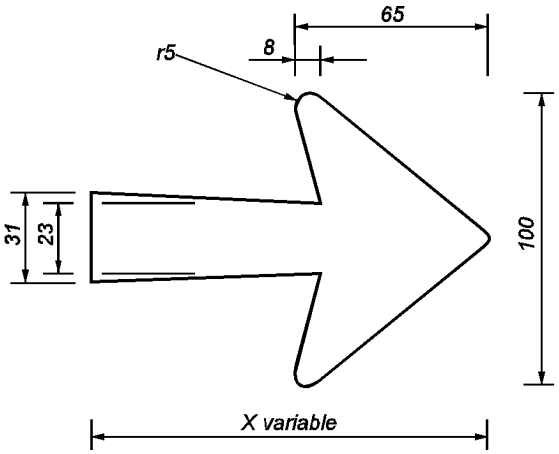
FIGURE 7.9.1 — **URBAN ROUTE MARKER SIGNS ROUTE NUMBER SHIELDS**

SUPPLEMENTARY ARROW BOARD DETAILS

ARROW OR LEGEND	:	***Black***
BACKGROUND	:	***Reflectorised white***
BORDER	:	***Black***
SIZES	:	***310 × 200 or 410 × 265***

All dimensions × 1.3 for larger size board

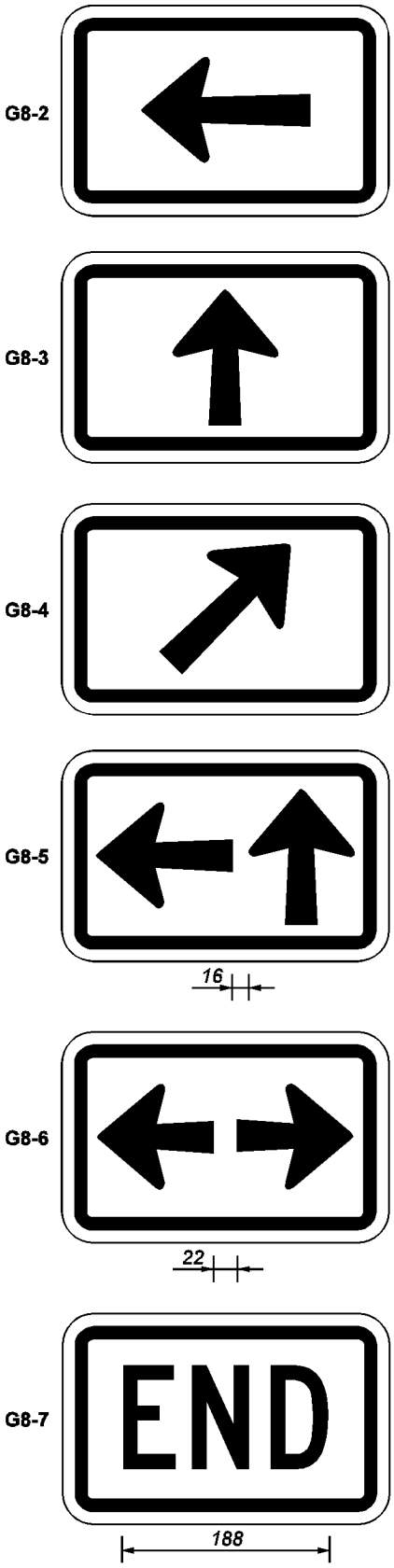




ARROW DETAILS (SMALL BOARD)

	G8-2	G8-3	G8-4	G8-5	G8-6
X	160	130	160	130	110

Arrow(s) or text centred vertically and horizontally on board.
All dimensions ×1.3 for larger size board.



URBAN ROUTE MARKER SIGNS
ARROW BOARDS AND 'END' SIGN

FIGURE 7.9.2

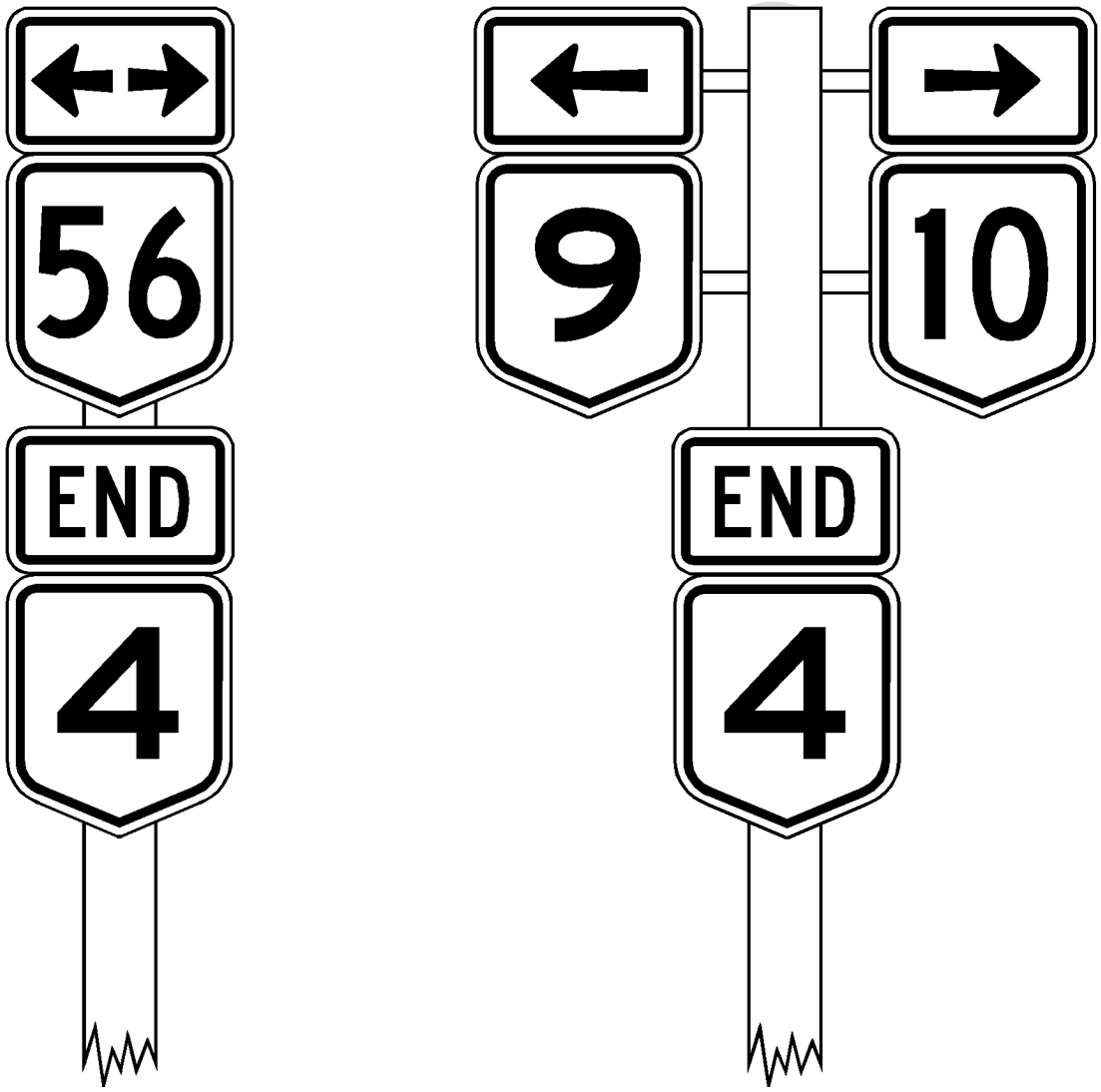


FIGURE 7.9.3 **URBAN ROUTE MARKER SIGNS TYPICAL SIGN ASSEMBLIES**

7.10 LETTERING ON GUIDE SIGNS

7.10.1 GENERAL

APPENDIX H of AS 1742.2 sets out a procedure for determining the size of lettering for guide signs. This procedure is explained in more detail in the Austroads *Guide to Traffic Engineering Practice Part 8: Traffic Control Devices, Section 3: Traffic Signs.*

7.10.2 LEGIBILITY

Research indicates that a driver does not start to read the information on a guide sign until some time after the legend first become legible. This distance is approximately 2/3 of the legibility distance of lettering on the sign.

The distance travelled while reading the legend or locating a place name on a sign is dependent on the form of the legend, eg. words in vertical stack or on a maptype layout, and the number of words to be read. Recent research work has shown that:

- the time taken by average observers to correctly read a sign containing 2 to 8 words is given by:

$$t = (0.32N - 0.21) \quad seconds$$

N is the number of words on the sign.

- the time taken to locate a place name on a sign with a vertical stack of up to 8 words, ie. a confirmation direction type sign, is given by:

$$t = 0.25N \quad seconds$$

There is little practical difference in the values of t when signs contain up to 5 words, ie. the generally accepted practical maximum for the number of words on a guide sign. For most general purposes the time taken to read a sign of up to 5 words may be taken as:

$$t = 0.25N \quad seconds$$

Where N is the number of words on the sign.

To minimise a driver's head and eye movement away from the road ahead when approaching a road sign the normal range of lateral vision is generally accepted to be limited to:

- 10 degrees horizontally, and
- 5 degrees vertically.

A sign legend should therefore be completely read before the centre of the sign subtends these angles at a driver's eye.

Using the above relationships and values the legibility distance of a sign is given by:

$$2/3L = 0.25Nv + S \cot\theta$$

L = the legibility distance required, in metres

N = the number of words on the sign, for 2 to 8 words

V = the 85% travel speed of vehicles approaching the sign in km/h, usually taken as:

- 60 km/h for urban areas,
- 70 km/h for semi-urban areas, and
- 80 - 100 km/h for rural areas.

v = the travel speed of vehicles approaching the sign, in metres per second

S = the lateral or vertical displacement of the centre of the sign from either:

- the centre of traffic lane for roadside mounted signs, or
- above the driver eye height for overhead mounted signs.

Rearranging the formula gives:

$$L = 0.105NV + 8.55S$$

for roadside mounted signs, and

$$L = 0.105NV + 17.1S$$

for overhead mounted signs.

Legibility distances for letters of the alphabets detailed in AS 1744 - 1975: *Standard Alphabets for Road Signs* have been determined for the average observer with normal or corrected vision. These are shown in TABLE 7.10.1.

TABLE 7.10.1: LEGIBILITY DISTANCE OF LETTERS

Alphabet Series	Legibility distance (metres per millimetre of Capital letter height)
C	0.5
D	0.6
E	0.7
MODIFIED E/Lower Case	0.75

7.10.3 LETTER STYLE

(a) GENERAL

The main alphabets used lettering for road signs are detailed in AS 1744: *Standard Alphabets for Road Signs*.

Details of the alphabets used for guide signs specified in this Manual are given in *Appendix A1 - Standard Alphabets.*

There are six capital letter alphabets and numerals, ranging from the narrow Series A to the broad Series F.

The Modified Series E alphabet contains capitals and lower case letters. It has a stroke width of one-fifth of the letter height and the lower case letters are 75% of the height of the capital letters. The lower case letters have the same legibility as capital letters.

The correct use of each alphabet is:

Series A and B: Not normally used on road signs, for legibility reasons. Should only be used for signs which do not have to be read from moving vehicles.

Series C: Only used when absolutely necessary, mostly when long words or messages must be made to fit a fixed size sign panel.

Series D: Suitable for most general use.

Series E: Also suitable for general use and is considered the most visually pleasing.

Series F: Not normally used but may be desirable in certain applications to emphasise a word.

Modified Series E/lower case: Should only be used for destination names on guide signs.

(b) GUIDE SIGN LETTERING RULES

(i) The Modified Series E/lower case alphabet is used for destination names and distance unit lettering.

(ii) All lettering for supplementary directional and/or driving instructions, street names, etc should be in CAPITALS, using a Series D or E alphabet of the same height as the lower case letters of the associated destination legend.

(ii) In urban areas where the local authority has adopted another alphabet style for street name signs that style should be used for street names shown on guide signs, to maintain consistency.

The use of capitals, or a combination of capital and lower case letters, for each type of guide sign is described and/or illustrated in Sections 7.2 to 7.7 of this Manual, and in AS 1742.1.

7.10.4 LETTER SIZE

(a) THE MODIFIED SERIES E ALPHABET

The legibility distance of the Modified Series E alphabet is 0.75 metres per millimetre of letter height. The height of the initial capital letters for the destination names shown on a roadside mounted guide sign containing 2 to 8 words is given by:

$$H = \frac{0.105NV + 8.55S}{0.75} \quad (mm)$$

This equation can be simplified to:

$$H_{(mm)} = 0.14NV + 11.4S$$

H = is the initial capital letter height of the destination names.

N = the number of words on the sign (2 to 8).

V = the 85% travel speed in km/h.

S = the lateral offset of the sign, measured from the centre of the sign to the centre of the traffic lane.

(b) LETTER SIZE ADJUSTMENTS

The letter size calculated using the equation in (a) above will normally need to be adjusted in the following situations:

(i) When other alphabets are used:

To provide the same readability as Modified Series E lettering the capital letter height (H) needs to be increased by:

- 7% for Series E lettering,
- 24% for Series D lettering, and
- 50% for Series C lettering.

(ii) Signs in urban areas:

Capital letter height (H) should be increased by 50% to compensate for adverse visual effects where:

- advertising signs, building lights, etc, reduce the conspicuity of traffic signs, and
- drivers are involved in complex traffic situations.

(iii) Overhead signs:

The lateral offset factor S used in the calculation of H should be varied in the following manner:

- Where the driver's comfortable field of view of an overhead mounted sign does not exceed 5 degrees vertically, S is multiplied by 2.
- Where an overhead sign is mounted at the side of the road, and is more than 3 m from the edge of the pavement, S is replaced with the equivalent lateral distance S_{EL} which is calculated from the formula:

$$S_{EL} = (S_l^2 + 4S_v^2)^{0.5}$$

S_l = lateral offset of the sign from the driver's path, and

S_v = vertical height of the centre of the sign above the driver's eye.

7.10.5 LETTER SPACING

The correct spacing between letters, and between words, is one of the most important aspects of sign design. This is especially true for reflectorised guide signs because it can:

- enhance maximum legibility distance,
- permit the message to be better balanced, and
- result in a sign panel with a pleasing visual appearance.

At night reflectorised letters appear to have a greater stroke width, because of halation effects. When letters are placed too close together they can appear to fuse into each other and the words they form may become illegible.

The spacing between letters is a function of letter stoke width and stroke width is related to letter height. It is not desirable to use the same spacing for all alphabets so each has its own spacing tables. Narrow, medium and wide spacing tables are given for each alphabet in AS 1744.

A narrow spacing should not normally be used for lettering on reflectorised signs. It but may occasionally be used for supplementary directional or driving instruction messages, but only when absolutely necessary.

A medium spacing should be used for all lettering using the capital letter alphabets.

A wide spacing is used to obtain maximum legibility, particularly for legends that use capitals combined with lower case letters, ie. the Modified Series E/lower case lettering. (Narrow and medium spacings are never used with this alphabet)

As a general guide, if spacing tables are not available, the spacing of letters on a reflectorised guide sign should be:

- twice the stroke width between two straight letters,
- 1.5 times the stroke width between a straight and rounded letter, and
- equal to the stroke width between two rounded letters.

When black letters are used on a light-coloured reflectorised background legibility will be improved if the stroke width is increased slightly, to counteract the apparent spread of the background into the legend at night.

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7.11 GUIDE SIGN LAYOUT

7.11.1 INTRODUCTION

This section details the a procedure for determining the layout of a guide sign and uses the advance direction sign shown in Figure 7.11.1 as a worked example.

Standard guide sign details are set out in Section 7.1.4 of this Manual. The paragraphs particularly relevant to sign layout are:

- 7.1.4 (b): *Shape*,
- 7.1.4 (f): *Letter Style*,
- 7.1.4 (g): *Letter Size*, and
- 7.1.4 (r): *Layout.*

The letter sty les minimum lettering sizes to be used for each ty pe of guide sign on various ty pes of roads are specified in this Manual. Le tter sizes greater than these minimums w ill often be necessary and a m ethod for establishing the correct size of lettering on a guide sign is given in Section 7.10:*Letter Type, Style and Size for Guide Signs*. A letter size less than the minimum specified in Section 7.1.4(g) should never be used.

A g uide si gn should n ormally co nform a s cl osely a s possible to a typical layout. When a special sign is required the general rules for guide sign lay out gi ven in Section 7.1.4 (r) apply.

Typical guide sign layouts are illustrated in:

- Section 7.2: *Advance Direction Signs*
- Section 7.3: *Advance Lane Designation Signs*
- Section 7.4: *Intersection Direction Signs*
- Section 7.5: *Confirmation Direction Signs*
- Section 7.6: *Street Nane Signs*
- Section 7.7: *Place Name Signs*

7.11.2 SIGN DETAILS

(a) GENERAL

The sign in the worked example has:

- 160 mm Modified Series E capital letters with 120 mm lower case letters for the destination names,
- 250 mm x 220 mm directional arrows,
- a 25 mm wide Internal dividing line, and
- a 40 mm wide border.

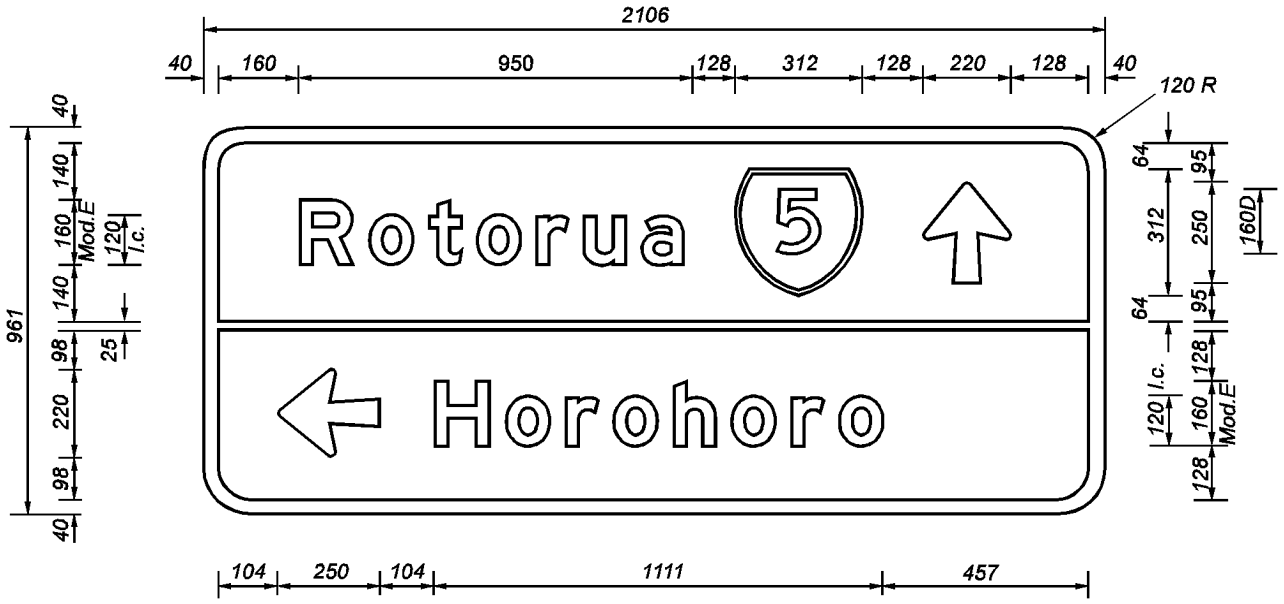

FIGURE 7.11.1: TYPICAL ADVANCE DIRECTION SIGN

(a) WORD LENGTH

The length of each word in the sign legend is found by summing the dimensions of letter widths and spacings. These are obtained from the appropriate letter size table or proportioned to the required letter size from a standard alphabet table.

The 160 mm MODIFIED SERIES E/lower case alphabet letter and spacing tables were used to get the dimensions in TABLES 7.11.1 and 7.11.2.

TABLE 7.11.1: WORD LENGTH CALCULATION FOR FIRST DESTINATION NAME

Destination name	Letter width	Space
R	131	
o	106	41
t	81	31
o	106	36
r	78	49
u	102	38
a	102	49
Sub-totals	**706**	**244**
	Total	**950**

TABLE 7.11.2: WORD LENGTH CALCULATION FOR SECOND DESTINATION NAME

Destination name	Letter width	Space
H	131	
o	106	55
r	78	49
o	106	24
h	101	49
o	106	49
r	78	49
o	106	24
Sub-totals	812	299
	Total	**1111**

(c) SIGN SIZE

(i) Width:

Sign width is the sum of the longest complete legend plus edge clearances and borders. For the example sign these are:

- a border,
- an end space between the border and the first letter of the destination name. This is approximately the capital letter height but it may need to be larger to allow an arrow on a subsequent line to be located correctly,
- the destination name(s),
- a route marker symbol and directional arrow plus the space between them, and the space between the arrow and the border. The spaces between destination names, route marker symbols, direction arrows and borders should all be approximately equal to 0.8 times the capital letter height, and
- a border.

The sign width may be rounded to a convenient value, if desirable, by minor adjustment of the space dimensions.

Details for the example sign are given TABLE 7.11.3.

TABLE 7.11.3: SIGN WIDTH CALCULATION

Item	Dimension	
	Rotorua	**Horohoro**
Border	40	40
End space	160	506 (442)
Destination name	950	1111
Space	128	128 (96)
Route marker symbol	312	
Space	128	
Direction arrow	220	250
Space	128	128 (96)
Border	40	40
Total	**2106**	**2203 (2075)**

The greatest sign width using standard details is given by the side road *"Horohoro"* pane. However, the spaces between a direction arrow and a border and/or a destination name can be in the range 0.8 to 0.6 times the capital letter height. Using the lower limit gives the figures shown in brackets in Table 7.11.3 so the maximum sign width can therefore set by the main road sign panel dimensions.

(ii) Height:

Sign height is the sum of:

- the height of capital letters and/or symbols in each line of legend,
- the width of internal dividing line(s),
- the width of borders and edge strips,
- the spaces between the lines of legend. These spaces should not be less than 0.5 times the capital letter size of the larger lettering in adjacent lines. Where increased clarity or differentiation is required, or the upper line has lower case letters which include descenders, these spaces should be increased to 0.75 times the capital letter size of the larger lettering in adjacent lines, and
- the spaces between the top and bottom of capital letters, adjacent borders and/or internal dividing line(s). These spaces should be approximately 0.8 times the capital letter size.

The sign height may be rounded to a convenient value, if desirable, by minor adjustment of the space dimensions. Details for the example sign are given TABLE 7.11.4.

TABLE 7.11.4: SIGN HEIGHT CALCULATION

Item	Dimension
Border	40
Vertical space	64
Route marker symbol height	312
Vertical space	64
Internal dividing line	25
Vertical space	128
Letter height	160
Vertical space	128
Border	40
Total	**961**

(d) LAYOUT

Sign layout will vary according to the type of sign and the amount of legend on it. Normally the largest legend is positioned first and then the smaller legends located, usually by centring them in the spaces available. Some items may then need to be adjusted a little, to give a better balanced or more visually acceptable appearance.

The layout prodedure for the example sign was:

(i) The destination name 'Rotorua', route marker symbol and directional arrow, together with borders and all spaces were set out to scale in the top panel.

(ii) The destination name 'Horohoro' wss centred in the lower sign panel.

(iii) The horizontal arrow was located opposite the destination name 'Horohoro', approximately midway between the inside edge of the border and the letter 'H'.

NOTE: ***Steps (ii) and (iii) may be altered:***

- ***if a `balanced', `offset', or `other' arrangement is desired, or***
- ***to suit the length of individual destinations or other legend on the sign.***

(iv) The external corner radius of a guide sign should be approximately 0.125 times the smallest dimension of the sign, with a maximum of 300 mm. This gave a 120 mm radius for the example sign.

7.12 GUIDE SIGN MOUNTING

Refer to the RSMA Compliance Standard for Traffic Signs

at http://www.rsma.org.nz/FileStore/RSMASTD2008.pdf

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7.13 TYPICAL GUIDE SIGNING LAYOUTS

7.13.1 GENERAL

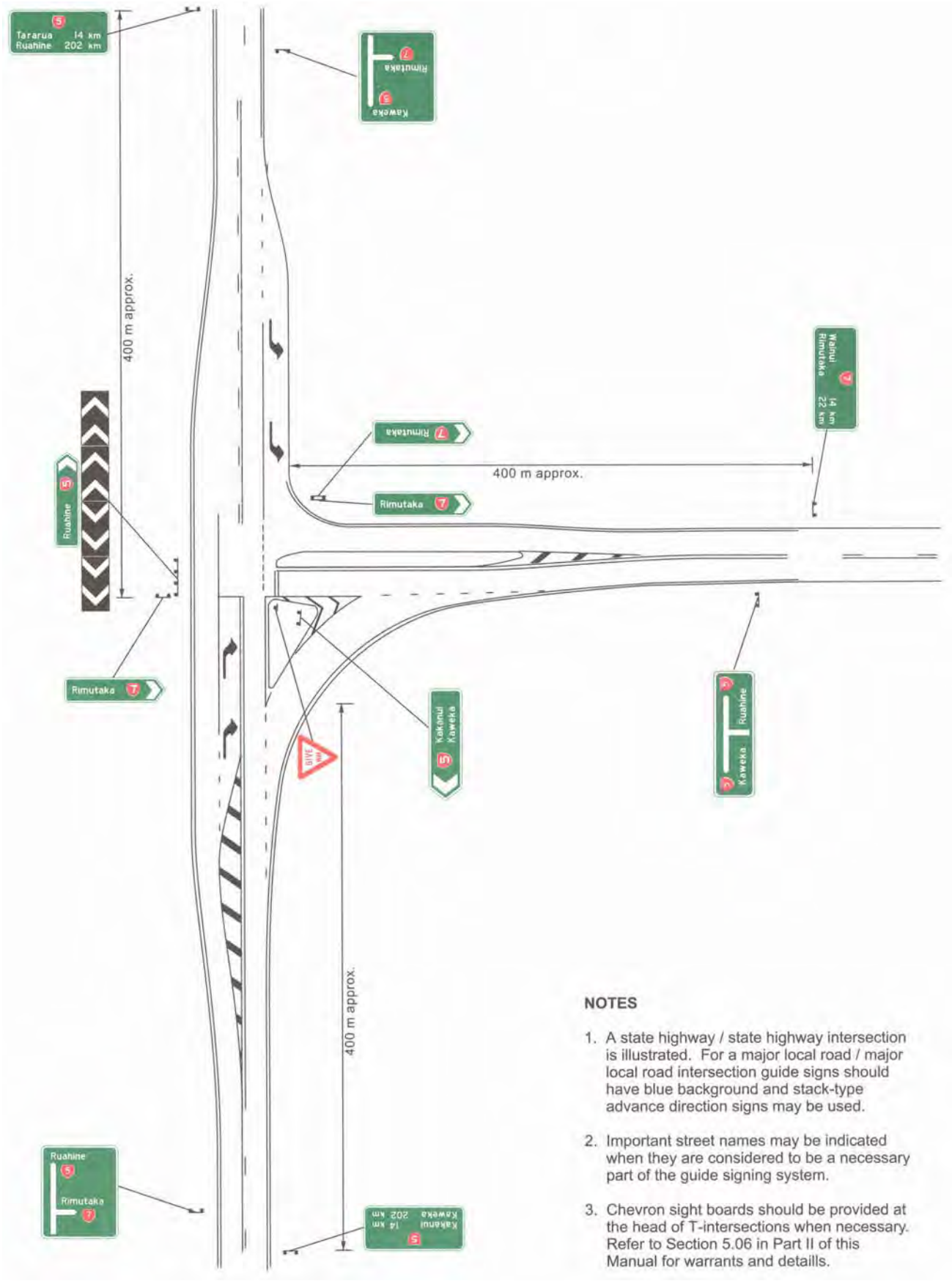
Typical guide signing layouts for most intersections and road classes defined in Section 7.1.3: *Provision of Guide Signing* are illustrated in this section of the of the Manual.

The diagrams show typical intersection layouts and the type, number and location of signs required by the guide signing system described in this Manual. Intersection geometric details are indicative only but the signing details are correct.

The diagrams do not cover all intersection and signing situations. Guide signing for each particular site should be developed from first principles using:

(a) the requirements for providing guide signs which are specified in the relative sections of this Manual, and

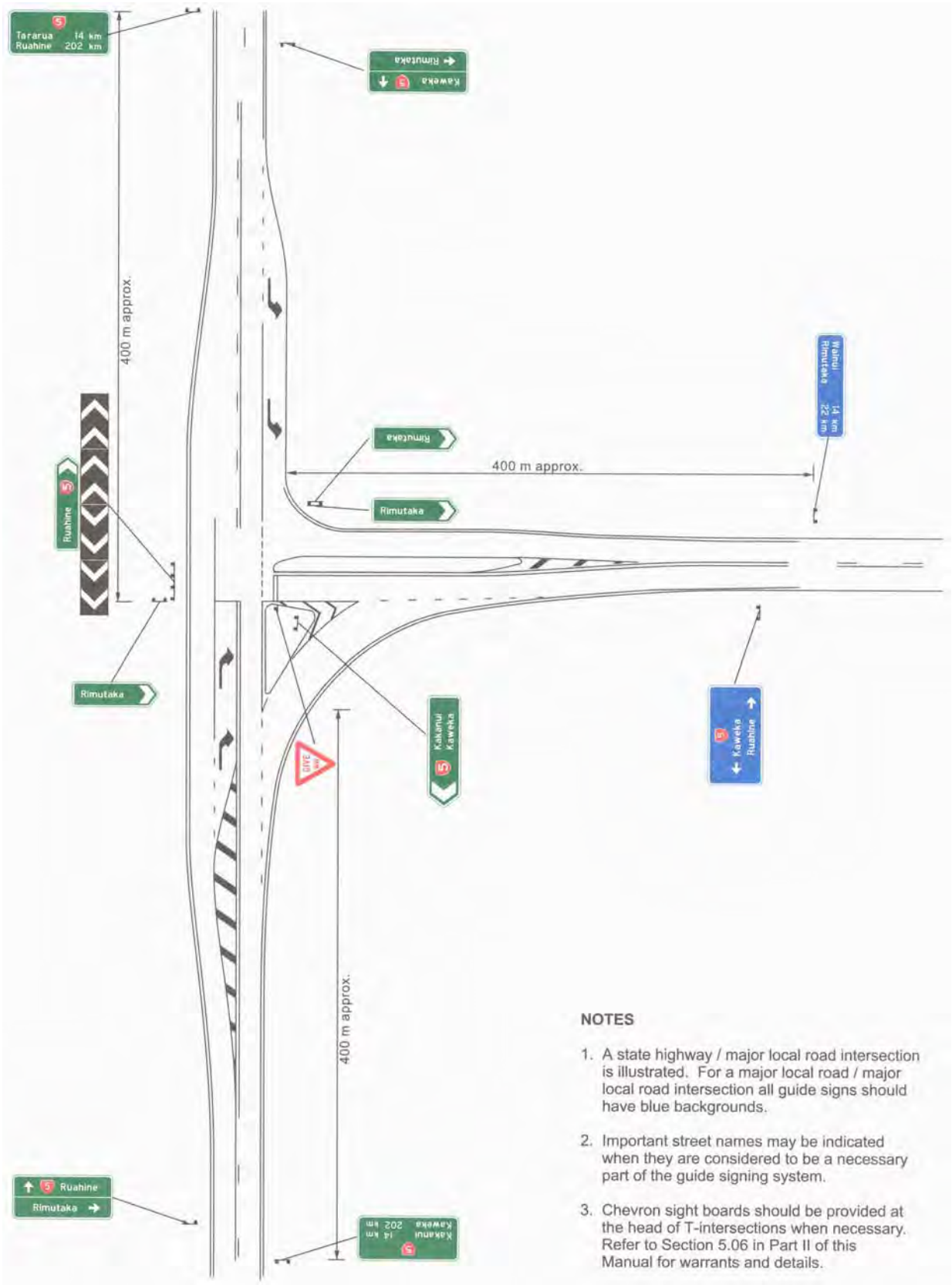
(b) the typical intersection illustration that is the closest geometric match to the actual intersection, as a guide to the location of the signs.



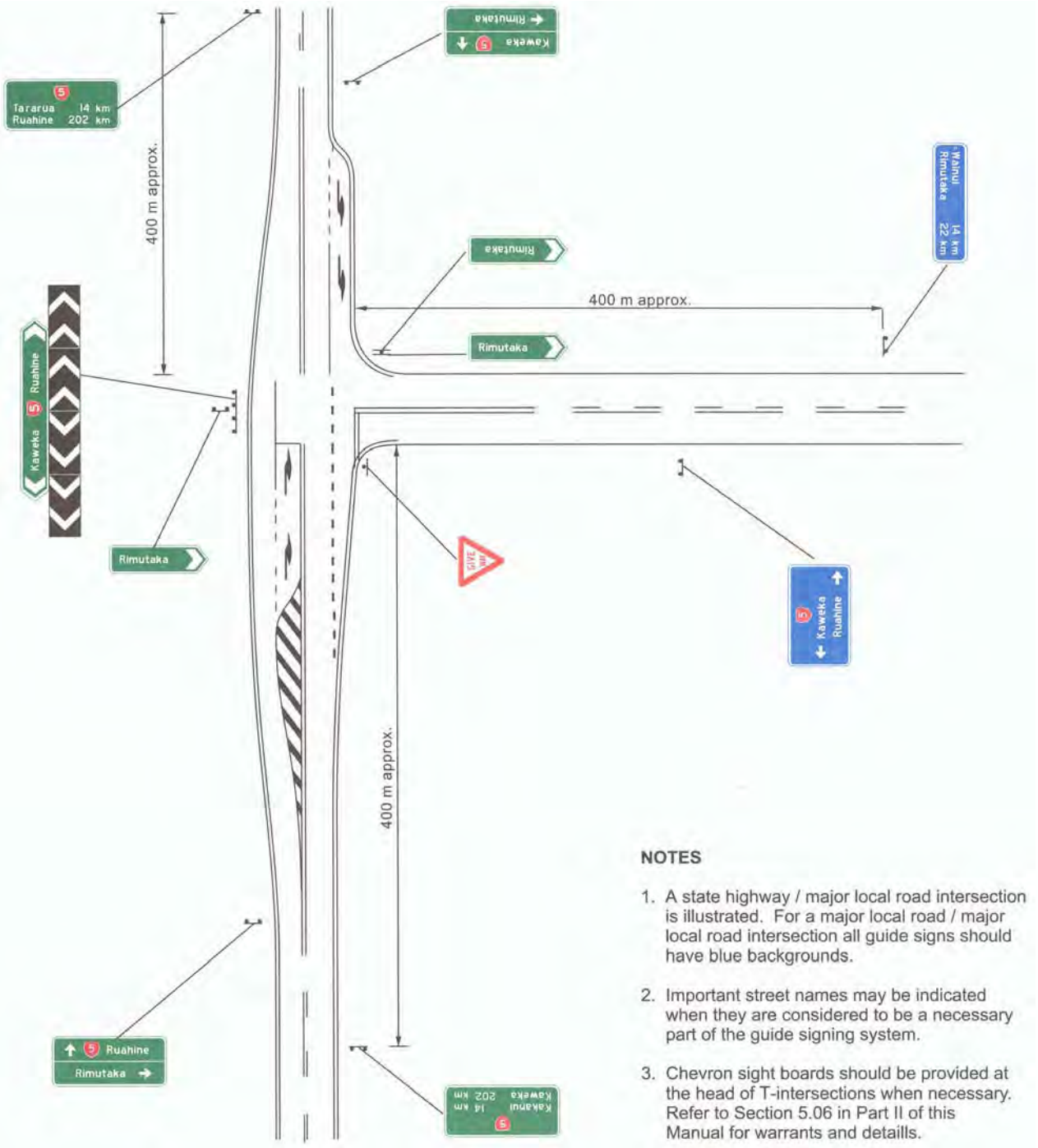
NOTES

1. A state highway / state highway intersection is illustrated. For a major local road / major local road intersection guide signs should have blue background and stack-type advance direction signs may be used.
2. Important street names may be indicated when they are considered to be a necessary part of the guide signing system.
3. Chevron sight boards should be provided at the head of T-intersections when necessary. Refer to Section 5.06 in Part II of this Manual for warrants and detaills.

FIGURE 7.13.1 TYPICAL GUIDE SIGNING AT THE INTERSECTION OF TWO MAJOR RURAL ROADS



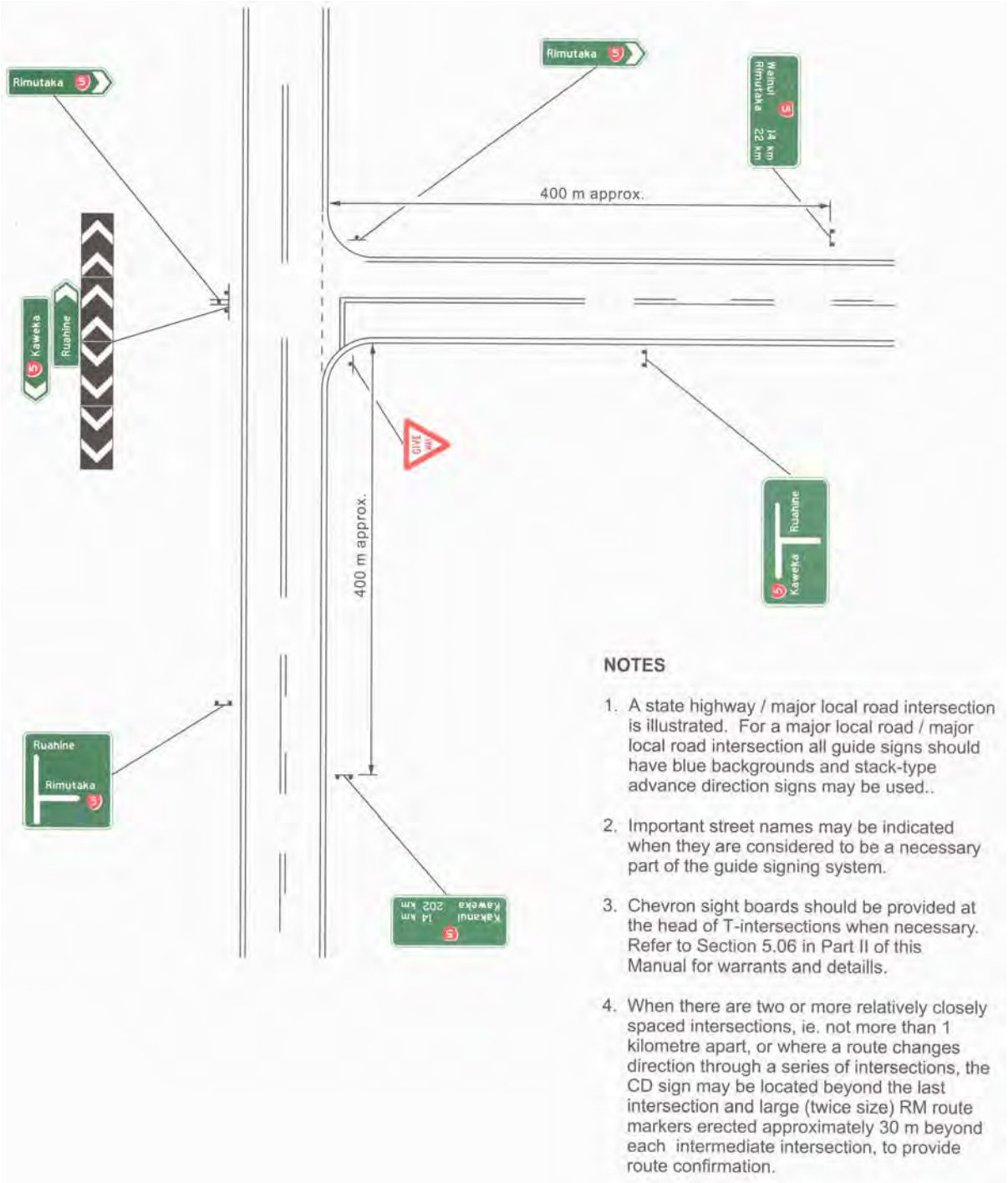
TYPICAL GUIDE SIGNING AT A CHANNELISED RURAL MAJOR ROAD INTERSECTION **FIGURE 7.13.2**



NOTES

1. A state highway / major local road intersection is illustrated. For a major local road / major local road intersection all guide signs should have blue backgrounds.
2. Important street names may be indicated when they are considered to be a necessary part of the guide signing system.
3. Chevron sight boards should be provided at the head of T-intersections when necessary. Refer to Section 5.06 in Part II of this Manual for warrants and detaills.

FIGURE 7.13.3 TYPICAL GUIDE SIGNING AT AN UNCHANNELISED RURAL MAJOR ROAD INTERSECTION



NOTES

1. A state highway / major local road intersection is illustrated. For a major local road / major local road intersection all guide signs should have blue backgrounds and stack-type advance direction signs may be used..
2. Important street names may be indicated when they are considered to be a necessary part of the guide signing system.
3. Chevron sight boards should be provided at the head of T-intersections when necessary. Refer to Section 5.06 in Part II of this Manual for warrants and detaills.
4. When there are two or more relatively closely spaced intersections, ie. not more than 1 kilometre apart, or where a route changes direction through a series of intersections, the CD sign may be located beyond the last intersection and large (twice size) RM route markers erected approximately 30 m beyond each intermediate intersection, to provide route confirmation.

TYPICAL GUIDE SIGNING WHERE A MAJOR ROAD CHANGES DIRECTION AT AN INTERSECTION FIGURE 7.13.4

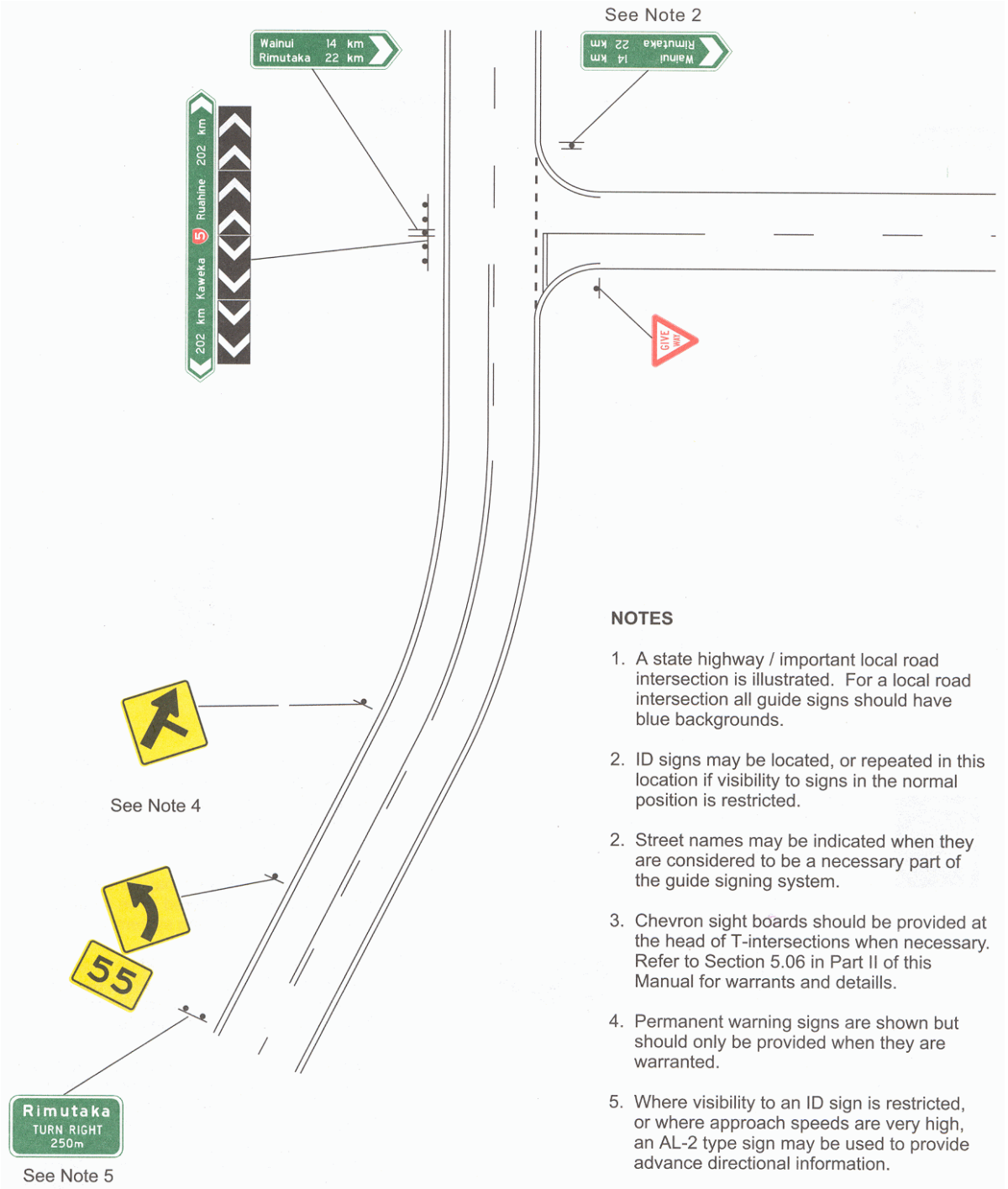
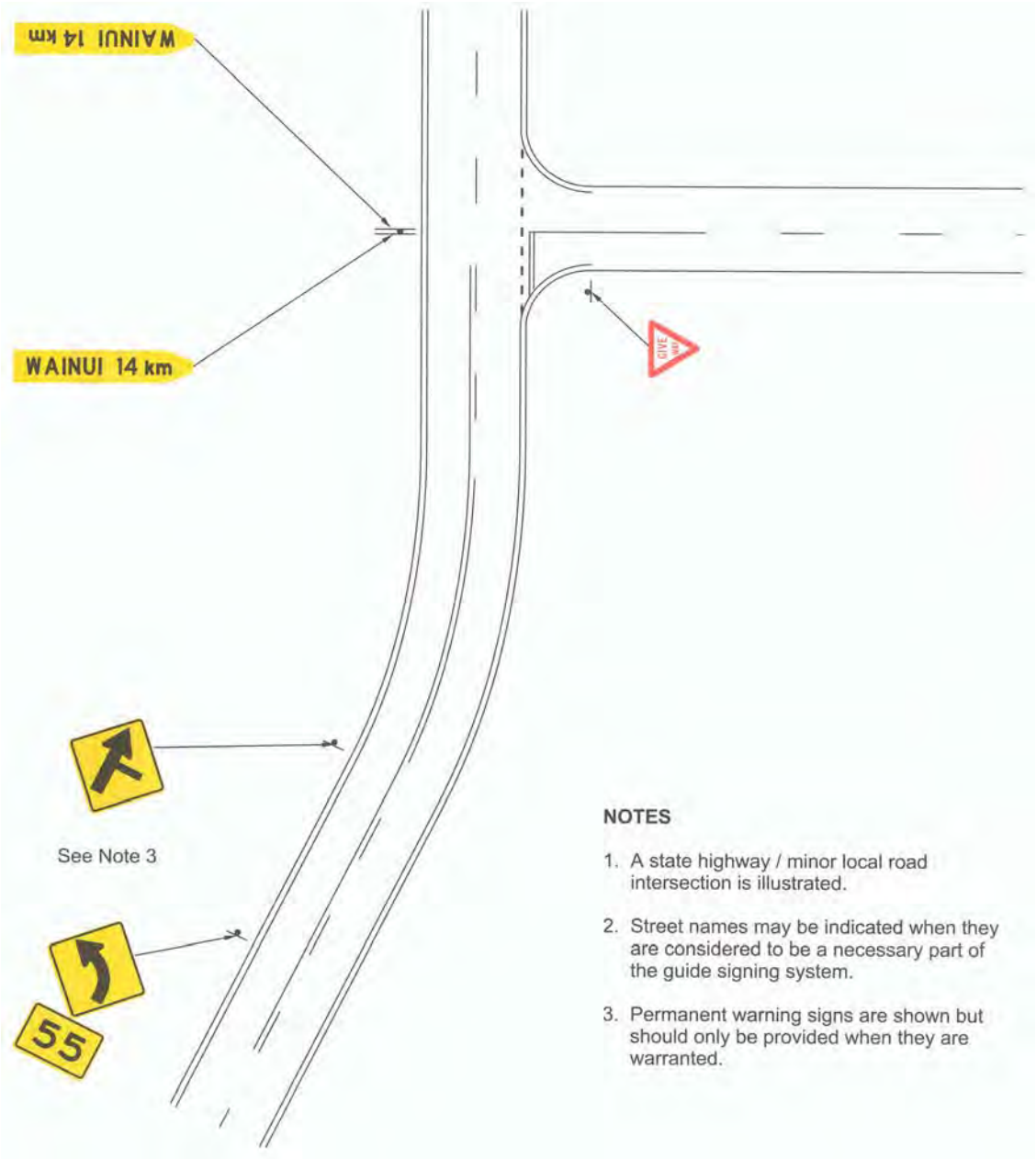
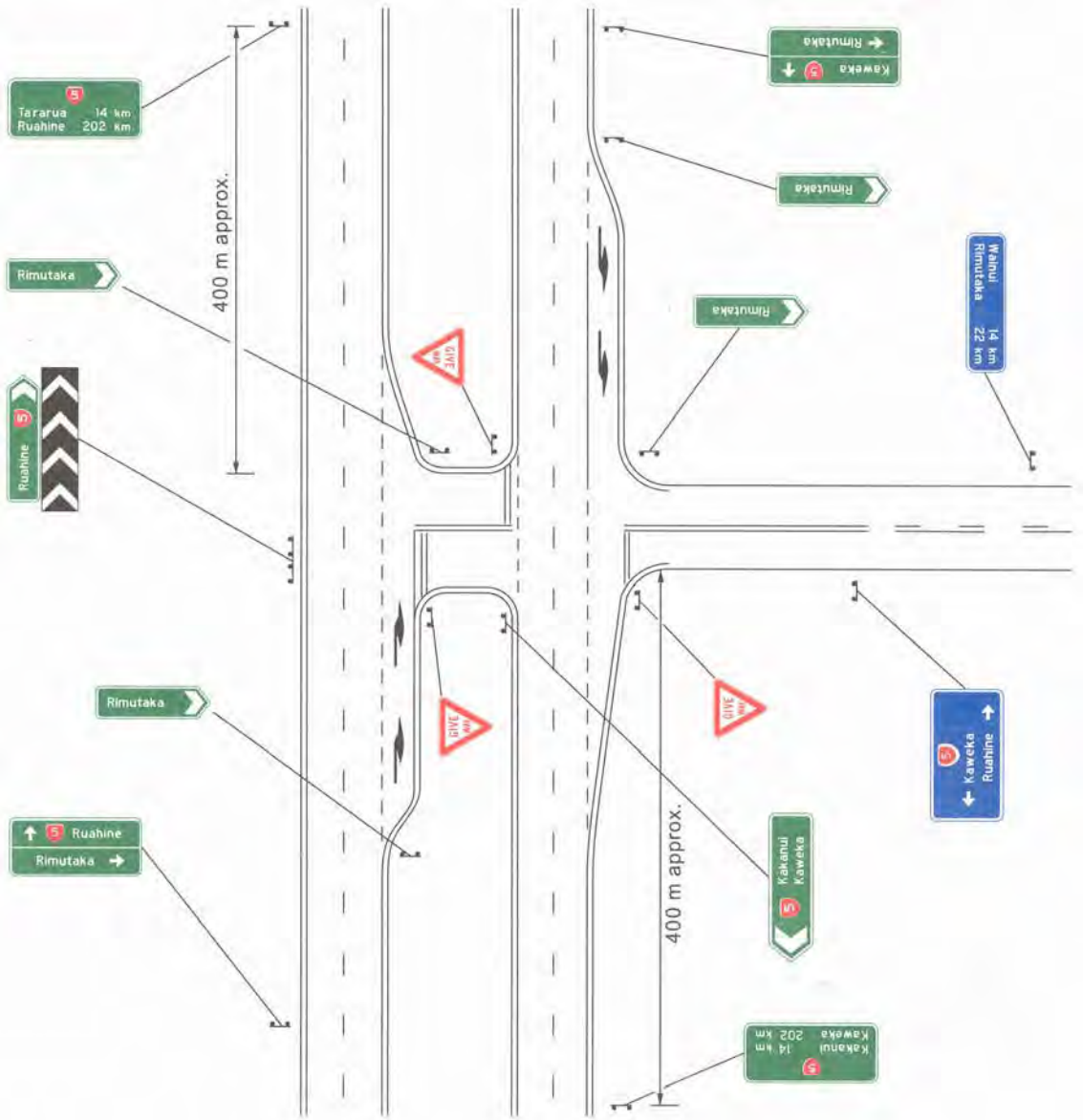


FIGURE 7.13.5 **TYPICAL GUIDE SIGNING AT AN IMPORTANT RURAL MINOR ROAD INTERSECTION**



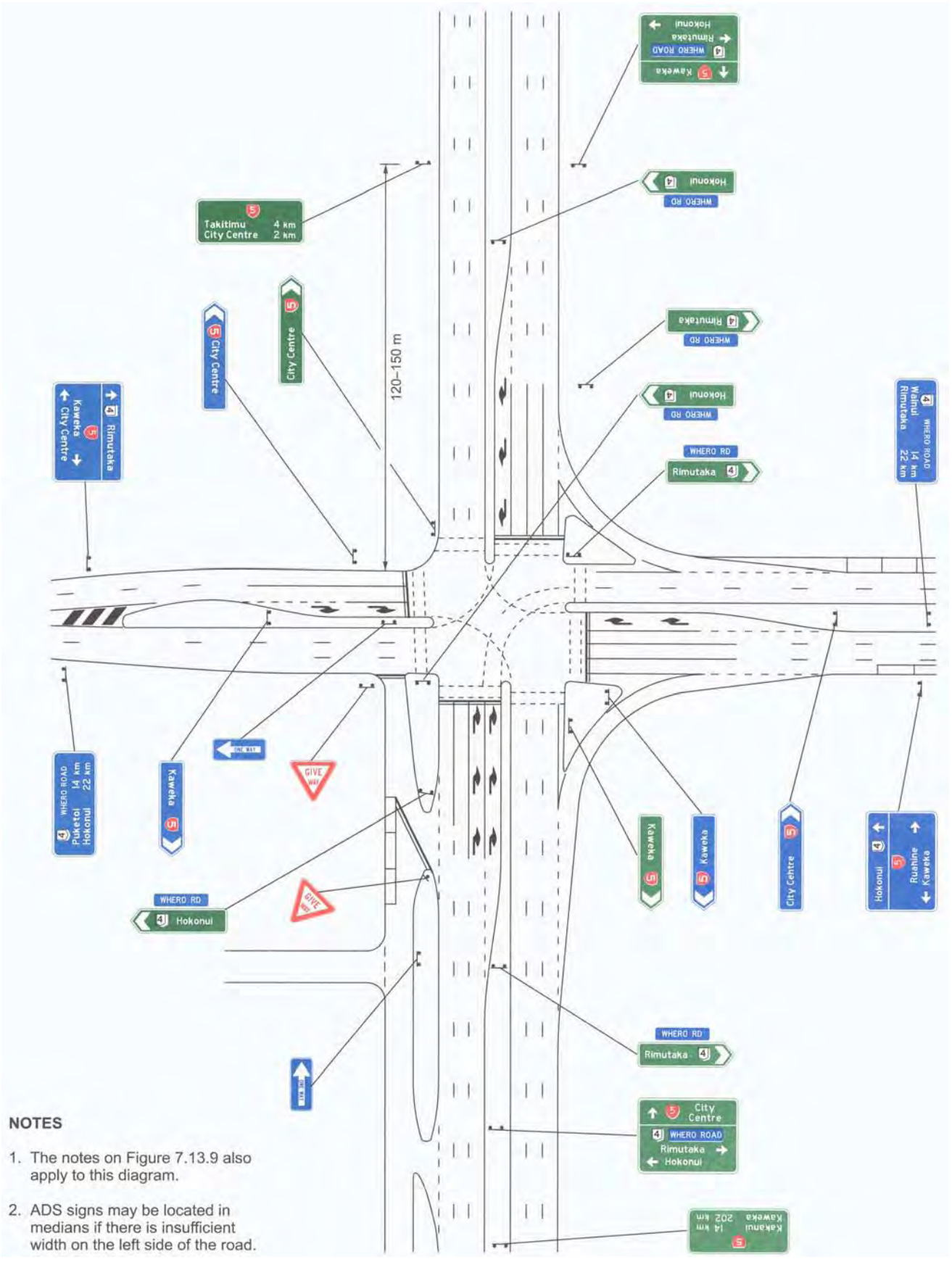
TYPICAL GUIDE SIGNING AT A MINOR RURAL ROAD INTERSECTION **FIGURE 7.13.6**



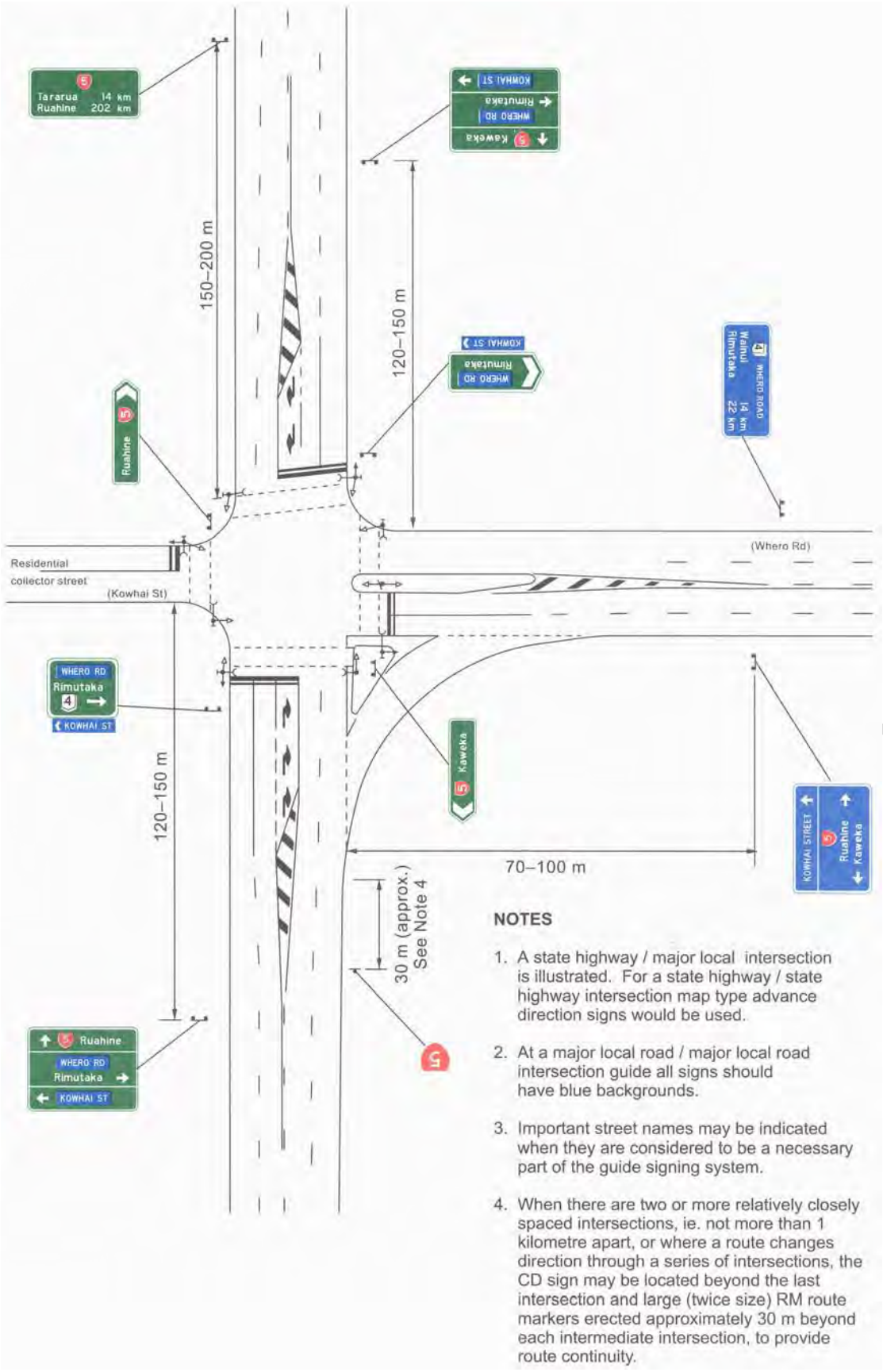
NOTES

1. All guide signs have green backgrounds at state highway / state highway intersections. Map type advance direction signs would also be used on all approaches to the intersection.
2. Important street names may be indicated but only when they are considered to be a necessary part of the guide signing system.

FIGURE 7.13.7 TYPICAL GUIDE SIGNING AT A RURAL DUAL CARRIAGEWAY INTERSECTION



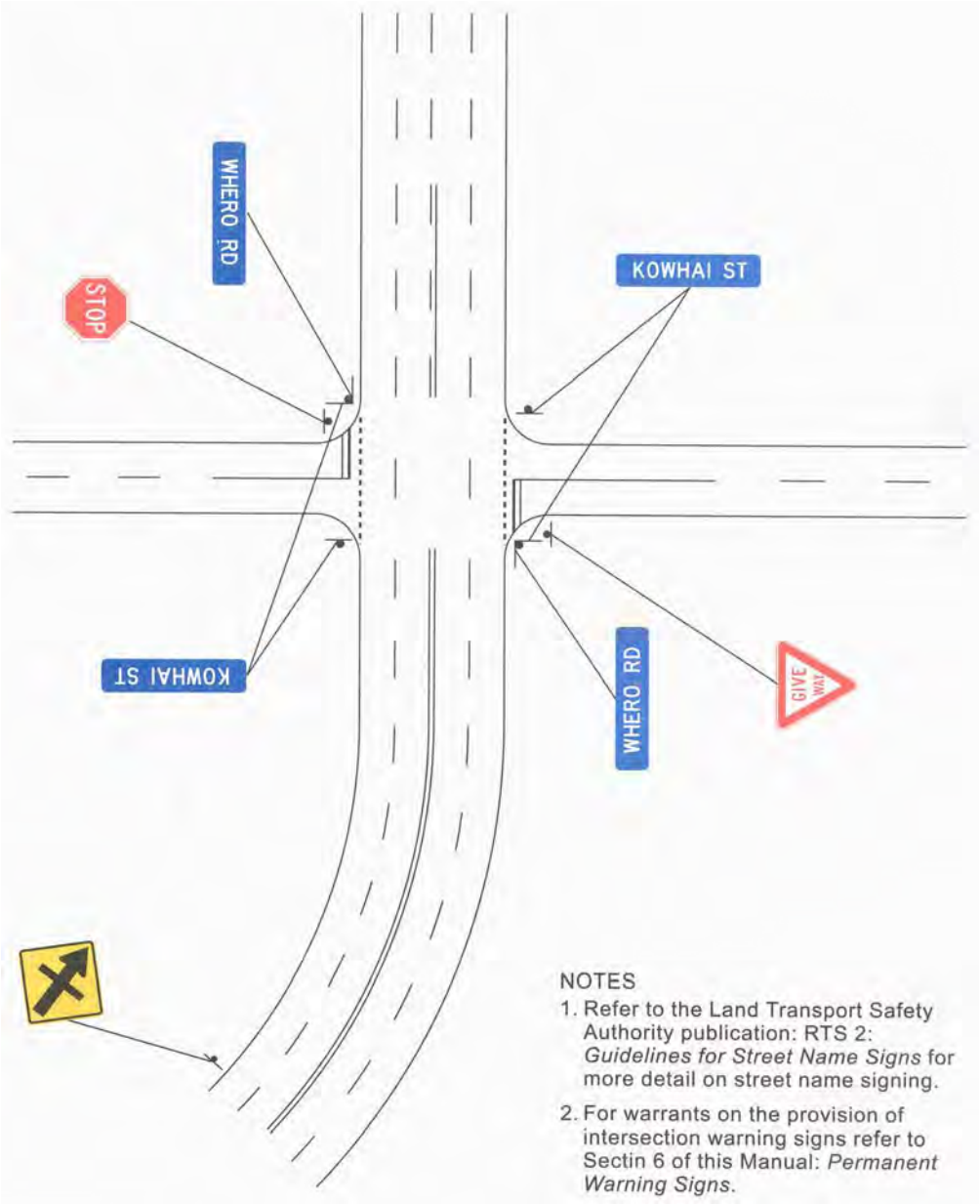
TYPICAL GUIDE SIGNING AT THE INTERSECTION OF TWO MAJOR URBAN ROADS FIGURE 7.13.8



NOTES

1. A state highway / major local intersection is illustrated. For a state highway / state highway intersection map type advance direction signs would be used.
2. At a major local road / major local road intersection guide all signs should have blue backgrounds.
3. Important street names may be indicated when they are considered to be a necessary part of the guide signing system.
4. When there are two or more relatively closely spaced intersections, ie. not more than 1 kilometre apart, or where a route changes direction through a series of intersections, the CD sign may be located beyond the last intersection and large (twice size) RM route markers erected approximately 30 m beyond each intermediate intersection, to provide route continuity.

FIGURE 7.13.9 **TYPICAL GUIDE SIGNING AT A MAJOR URBAN INTERSECTION**



TYPICAL GUIDE SIGNING AT AN URBAN MAJOR ROAD / MINOR ROAD INTERSECTION FIGURE 7.13.10

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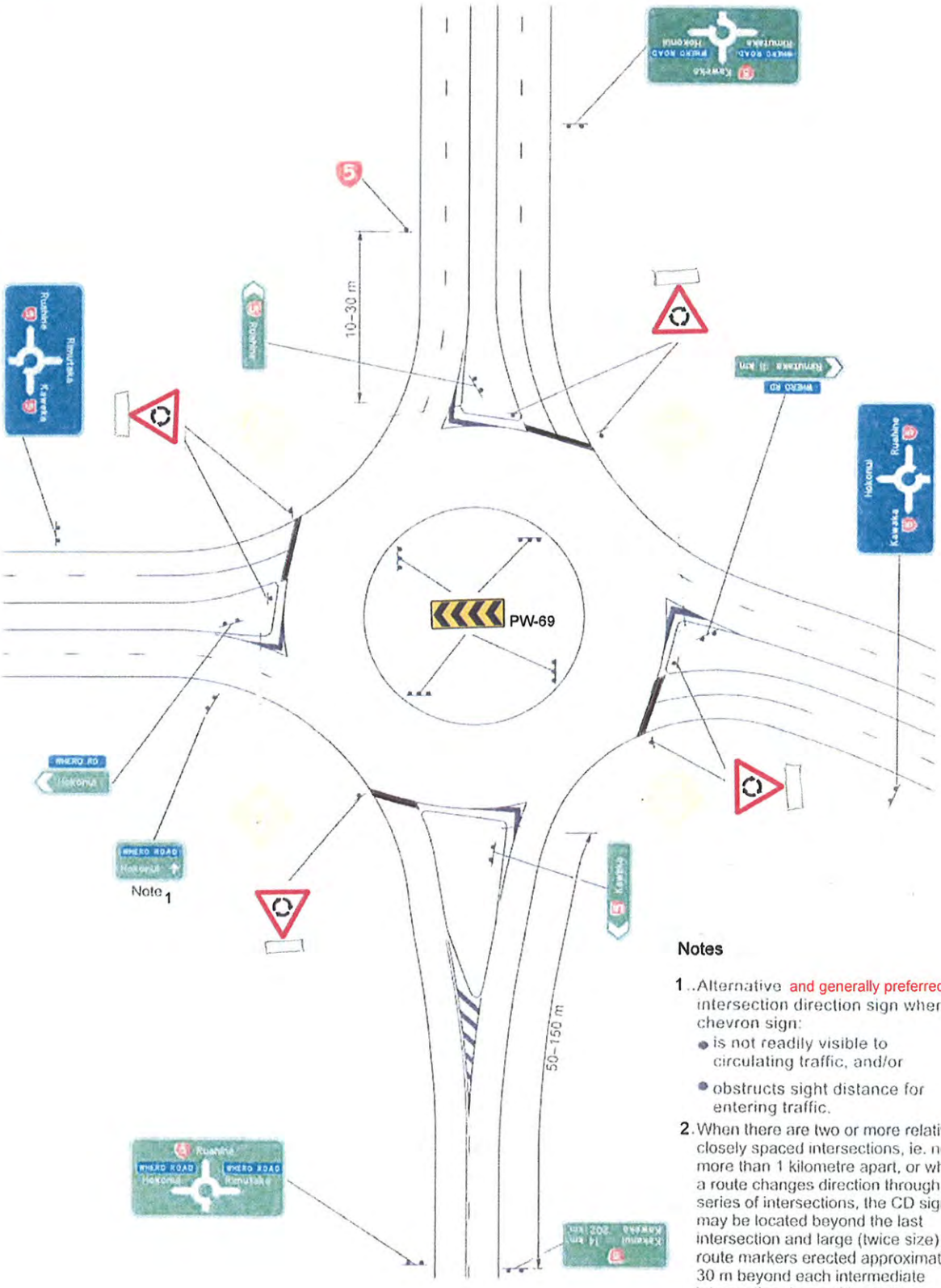

Notes

1. Alternative and generally preferred intersection direction sign when a chevron sign:
   - is not readily visible to circulating traffic, and/or
   - obstructs sight distance for entering traffic.
2. When there are two or more relatively closely spaced intersections, ie. not more than 1 kilometre apart, or where a route changes direction through a series of intersections, the CD sign may be located beyond the last intersection and large (twice size) RM route markers erected approximately 30 m beyond each intermediate intersection, to provide route continuity.

FIGURE 7.13.11 **TYPICAL GUIDE SIGNING AT A ROUNDABOUT**

Diagram deleted - refer page 7 - 75

TYPICAL GUIDE SIGNING AT A MINOR ROUNDABOUT **FIGURE 7.13.12**

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7.14 STATE HIGHWAY ROUTE MAPS AND GUIDE SIGN STAGE AND DESTINATION NAMES

NORTH ISLAND STATE HIGHWAY MAP FIGURE 7.14.1

7.14.1 STAGE AND DESTINATION NAMES FOR NORTH ISLAND STAT E HIGHWAY GUIDE SIGNS

State Highway 1:

1/10 at Awanui:	1/12 at Ohaeawai:	1/10 at Pakaraka:	1/11 at Kawakawa
1 Cape Reinga	1 Cape Reinga	1 Cape Reinga	1 Cape Reinga
10 Bay of Islands	12 Dargaville	10 Bay of Islands	11 Paihia
1 Whangarei	1 Whangarei	1 Whangarei	1 Whangarei

1/14 at Whangarei:	1/15 south of Whangarei:	1/12 at Brynderwyn:	1/16 at Wellsford:
1 Cape Reinga	1 Whangarei	1 Whangarei	1 Whangarei
14 Dargaville	14 Port	12 Dargaville	16 Helensville
1 Whangarei	1 Auckland	1 Auckland	1 Auckland

1/18 south of Albany:	1/16 at Auckland:	1/20 at Manukau: (Redoubt Road)	1/22 at Drury:
1 Whangarei	1 Whangarei	1 Auckland	1 Auckland
18 Waitakere North Shore	16 Helensville	20 Airport	22 Pukekohe
1 Auckland	1 Hamilton	1 Hamilton	1 Hamilton

1/2 north of Pokeno:	1/23 at Hamilton:	1/3 south of Hamilton: (Lorne Street)	1/26 south of Hamilton: (Morrinsville Road)
1 Auckland	1 Auckland	1 Auckland	1 Hamilton
2 Coromandel Peninsula Tauranga	City Centre 23 Raglan	3 New Plymouth Waitomo Caves	26 Coromandel Peninsula
1 Hamilton	1 Rotorua	1 Rotorua	1 Rotorua

1/21 at Tamahere:	1/29 at Piarere:	1/27 at Tirau:	1/5 south of Tirau:
1 Hamilton	1 Hamilton	1 Hamilton	1 Hamilton
21 Airport Mystery Creek	29 Tauranga	27 Coromandel Peninsula Tauranga	5 Rotorua
1 Rotorua	1 Rotorua	1 Rotorua	1 Taupo

1/28 at Putararu:	1/32 at Tokoroa:	1/30 north of Atiamuri:	1/5 at Wairakei:
1 Hamilton	1 Hamilton	1 Hamilton	1 Hamilton
28 Rotorua Tauranga	32 Turangi National Park	30 Rotorua	5 Rotorua
1 Taupo	1 Taupo	1 Taupo	1 & 5 Taupo Napier

1/5 south of Taupo:	1/41 at Turangi:	1/46 at Rangipoi:	1/49 at Waiouru:
1 & 5 Hamilton Rotorua	1 Taupo	1 Taupo	1 Taupo
5 Napier	41 Taumarunui National Park	46 National Park	49 Ohakune National Park
1 Palmerston Nth	1 Palmerston Nth	1 Palmerston Nth	1 Palmerston Nth

1/54 at Vinegar Hill:	1/3 at Bulls:	1/3 at Sanson:	1/57 south of Levin:
1 Taupo	1 Taupo	1 & 3 Taupo Wanganui	1 Taupo
54 Fielding	3 Wanganui	3 Palmerston Nth	57 Palmerston Nth
1 Palmerston Nth	1 & 3 Wellington Palmerston Nth	1 Wellington	1 Wellington

1/58 at Paremata:	1/2 at Ngauranga:
1 Palmerston Nth	1 Porirua Palmerston Nth
58 Hutt Valley	2 Hutt Valley Masterton Picton Ferry
1 Wellington	1 Wellington

State Highway 2:

2/1 north of Pokeno:	2/25 north of Mangatarata:	2/27 at Mangatarata:	2/26 at Paeroa:
1 Auckland	2 Auckland	2 Auckland	2 Auckland
2 Coromandel Peninsula Tauranga	25 Coromandel Peninsula	27 Tirau	26 Coromandel Peninsula
			26 Hamilton
1 Hamilton	2 Tauranga	2 Tauranga	2 Tauranga

2/25 at Waihi:	2/29 at Hairini:	2/29 at Te Maunga:	2/33 at Paengaroa:
2 Auckland	2 Tauranga	2 & 29 Tauranga	2 Tauranga
25 Coromandel Peninsula	29 Hamilton	29 Mount Maunganui	33 Rotorua
2 Tauranga	2 & 29 Mount Maunganui Whakatane	2 Whakatane	2 Whakatane

2/34 north of Edgecumbe: (Awaiti Sth Road)	2/30 at Awakeri:	2/35 at Opotoki:	2/35 at Makaraka:
2 Tauranga	2 Tauranga	2 Whakatane	2 Whakatane
34 Rotorua	30 Rotorua	35 Te Araroa	35 Gisborne Te Araroa
	30 Whakatane		
2 Whakatane	2 Gisborne	2 Gisborne	2 Napier

2/38 at Wairoa:	2/5 at Eskdale:	2/50 at Napier: (Hyderabad Road)	2/50 at Napier: (Taradale Road)
2 Gisborne	2 Gisborne	2 Gisborne	2 & 50 Gisborne Port
38 Waikaremoana	5 Taupo	50 Port	50 Taradale (ALTERNATIVE ROUTE SOUTH)
2 Napier	2 Napier	2 & 50 Napier Hastings	2 Napier Hastings

2/50 south of Takapau:	2/3 at Woodville:	2/53 at Featherston:	2/58 at Haywards:
2 Napier	2 Napier	2 Masterton	2 Masterton
50 Napier (ALTERNATIVE ROUTE)	3 Palmerston Nth	53 Martinborough	58 Porirua
2 Masterton	2 Masterton	2 Wellington	2 Wellington

2/1 at Ngauranga:
1 Porirua Palmerston Nth
2 Hutt Valley Masterton Picton Ferry
1 Wellington

State Highway 3:

3/1 south of Hamilton: (Lorne Street)	3/21 south of Rukuhia:	3/31 at Otorohanga:	3/37 at Hangatiki:
1 Auckland	3 Hamilton	3 Hamilton	3 Hamilton
3 New Plymouth Waitomo Caves	21 Airport Mystery Creek	31 Kawhia	37 Waitomo Caves
1 Rotorua	3 New Plymouth Waitomo Caves	3 New Plymouth Waitomo Caves	3 New Plymouth

3/30 at Te Kuiti:	3/4 at Eight Mile Junction:	3/3A south of Waitara:	3/45 at New Plymouth:
3 Hamilton Waitomo Caves	3 Hamilton	3 Hamilton	3 Hamilton
30 Whakamaru	4 National Park	3A Wanganui	45 Opunake
3 New Plymouth	3 New Plymouth	3 New Plymouth	3 Wanganui

3/3A at Inglewood:	3/43 at Stratford:	3/45 at Hawera	3/4 south of Wanganui:
3A Hamilton	3 New Plymouth	3 New Plymouth	3 Wanganui New Plymouth
3 New Plymouth	43 Taumarunui	45 Opunake	4 National Park
3 Wanganui	3 Wanganui	3 Wanganui	3 Palmerston Nth

3/1 at Bulls:	3/1 at Sanson:	3/54 west of Palmerston North:	3/56 at Palmerston Nth:
1 Taupo	1 & 3 Taupo Wanganui	3 Wanganui	3 Wanganui
3 Wanganui	3 Palmerston Nth	54 Fielding	56 Levin
1 & 3 Wellington Palmerston Nth	1 Wellington	3 Palmerston Nth	3 Woodville

3/57 east of Ashhurst:	3/2 at Woodville:
3 Woodville	2 Napier
57 Levin	3 Palmerston Nth
3 Palmerston Nth	2 Masterton

State Highway 3A:

3A/3 south of Waitara:	3A/3 at Inglewood:
3 Hamilton	3 New Plymouth
3A Wanganui	3A Hamilton
3 New Plymouth	3 Wanganui

State Highway 4:

4/3 at Eight Mile Junction:	4/43 at Taumarunui:	4/41 at Manunui:	4/47 at National Park:
3 Hamilton	4 Hamilton	4 Hamilton	4 National Park
4 National Park	43 Stratford	41 Turangi	47 Turangi
3 New Plymouth	4 National Park	4 National Park	4 Wanganui

4/49 north of Raetihi:	4/3 south of Wanganui:
4 National Park	3 Wanganui New Plymouth
49 Ohakune Waiouru	4 National Park
4 Wanganui	3 Palmerston Nth

State Highway 5:

5/1 south of Tirau:	5/28 west of Tapapa: (Whites Road)	5/28 at Tapapa: (Somerville Road)	5/30A at Rotorua: (Pukuatua Street)
1 Hamilton	5 Hamilton	5 & 28 Hamilton Putararu	5 Hamilton
5 Rotorua	28 Putararu	28 Tauranga	30A City Centre Whakatane
1 Taupo	5 & 28 Rotorua Tauranga	5 Rotorua	5 Taupo

5/30 south of Rotorua: (Old Taupo Road)	5/30 south of Rotorua: (near Waipa Mill	5/38 at Waiotapu:	5/1 at Wairakei:
5 Hamilton	5 & 30 Rotorua	5 Rotorua	1 Hamilton
30 City Centre Whakatane	30 Atiamuri	38 Waikeremoana	5 Rotorua
5 & 30 Taupo Atiamuri	5 Taupo	5 Taupo	1 & 5 Taupo Napier

5/1 south of Taupo:	5/2 at Eskdale:
1 & 5 Rotorua Hamilton	2 Gisborne
5 Napier	5 Taupo
1 Palmerston Nth	2 Napier

State Highway 10:

10/1 at Awanui:	10 at Puketona Junction:	10/1 at Pakaraka:
1 Cape Reinga	10 Kaitaia	1 Cape Reinga
10 Bay of Islands	Paihia	10 Bay of Islands
1 Whangarei	10 Kawakawa	1 Whangarei

State Highway 11:

11/1 at Kawakawa:	11 at Paihia: (11 ENDS at Paihia)
1 Cape Reinga	11 Kawakawa
11 Paihia	
1 Whangarei	

State Highway 12:

12/1 at Ohaewai:	12/14 at Dargaville:	12/1 at Bryndewyn:
1 Cape Reinga	12 Ohaewai	1 Whangarei
12 Dargaville	14 Whangarei	12 Dargaville
1 Whangarei	12 Bryndewyn	1 Auckland

State Highway 14:

14/1 at Whangarei:	14/12 at Dargaville:
1 Cape Reinga	12 Ohaewai
14 Dargaville	14 Whangarei
1 Whangarei	12 Bryndewyn

State Highway 15:

15/1 at Whangarei:	15 at Port: (15 ENDS at Port)
1 Whangarei	15 Whangarei
15 Port	
1 Auckland	

State Highway 16:

16/1 at Auckland: (16 ENDS at Quay Street)	16/1 at Auckland: (Grafton Road)	16/18 south of Kumeu:	16/1 at Wellsford:
16 Helensville	1 Whangarei	16 Auckland	1 Whangarei
	16 Helensville	18 North Shore	16 Helensville
	1 Hamilton	16 Helensville	1 Auckland

State Highway 18:

18/16 south of Kumeu:	18/1 south of Albany:
16 Helensville	1 Whangarei
18 North Shore	18 Waitakere
	North Shore
16 Auckland	1 Auckland

State Highway 20:

20/1 at Manukau: (Redoubt Road)	20/20A at Mangere: (George Bolt Memorial Drive)	20 at Hillsborough: (20 ENDS at Hillsborough Road)
1 Auckland	20 Auckland	Auckland
20 Airport	20A Airport	20 Airport Manukau
1 Hamilton	20 Manukau	Hillsborough

State Highway 20A:

20A/20 at Mangere: (George Bolt Memorial Drive)	20A Airport: (20A ENDS at Airport)
20 Auckland	20A Auckland
20A Airport	
20 Manukau	

State Highway 21:

21/1 at Tamahere:	21/3 south of Rukuhia:
1 Hamilton	3 Hamilton
21 Airport Mystery Creek	21 Airport Mystery Creek
1 Rotorua	3 New Plymouth Waitomo Caves

State Highway 22:

22/1 at Drury:	22 at Pukekohe: (22 ENDS at Pukekohe)
1 Auckland	22 Drury
22 Pukekohe	
1 Hamilton	

State Highway 23:

23/1 at Hamilton:	23 at Raglan: (23 ENDS at Raglan)
1 Auckland	23 Hamilton
City Centre	
23 Raglan	
1 Rotorua	

State Highway 24:

24/27 at Matamata:	24/29 east of Te Poi: (Tauranga Road)
27 Coromandel Peninusla	29 Tauranga
24 Tauranga	24 Matamata
27 Tirau	29 Hamilton

State Highway 25:

25/2 north of Mangatarata:	25/25A/26 at Kopu:	25/25A at Hikuai:	25/2 at Waihi:
2 Auckland	25 Auckland	25 Coromandel	2 Auckland
25 Coromandel Peninsula	25 Coromandel	25A Auckland	25 Coromandel Peninsula
2 Tauranga	25A Hikuai	25 Tauranga	2 Tauranga
	26 Hamilton		

State Highway 25A:

25A/25/26 south of Kopu:	25A/25 at Hikuai:
25 Auckland	25 Coromandel
25 Coromandel	25A Auckland
25A Hikuai	
26 Hamilton	25 Tauranga

State Highway 26:

26/1 south of Hamilton: (Morrinsville Road)	26/27 at Tatuanui:	26/2 at Paeroa:	26/25/25A at Kopu:
1 Hamilton	26 Coromandel Peninsula	26 Coromandel Peninsula	25 Coromandel
26 Coromandel Peninsula	27 Auckland	2 Auckland	25A Hikuai
	27 Tirau	2 Tauranga	25 Auckland
1 Rotorua	26 Hamilton	26 Hamilton	26 Hamilton

State Highway 27:

27/2 at Mangatarata:	27/26 at Tatuanui:	27/24 at Matamata:	27/29 east of Hinuera:
2 Auckland	27 Auckland	27 Coromandel Peninsula	27 Coromandel Peninsula
27 Tirau	26 Coromandel Peninsula	24 Tauranga	29 Hamilton
	26 Hamilton		29 Tauranga
2 Tauranga	27 Tirau	27 Tirau	27 Tirau

27/1 at Tirau:
1 Hamilton
27 Coromandel Peninsula Tauranga
1 Rotorua

State Highway 28:

28/1 at Putarau:	28/5 west of Tapapa: (Whites Road)	28/5 at Tapapa: (Somerville Road)	28/29 east of Te Poi: (Rapurapu Road)
1 Hamilton	5 Hamilton	28 & 5 Hamilton Putararu	29 Hamilton Tirau
28 Rotorua Tauranga	28 Putarau	28 Tauranga	28 Rotorua Putararu
1 Taupo	28 & 5 Tauranga Rotorua	5 Rotorua	29 Tauranga

State Highway 29:

29/1 at Piarere:	29/27 east of Hinuera:	29/24 east of Te Poi: (Tauranga Road)	29/28 east of Te Poi: (Rapurapu Road)
1 Hamilton	29 Hamilton	29 Hamilton	29 Hamilton Tirau
29 Tauranga	27 Coromandel Peninsula	24 Matamata	28 Rotorua Putararu
	27 Tirau		
1 Rotorua	29 Tauranga	29 Tauranga	29 Tauranga

29/2 at Hairini:	29/2 at Te Maunga:
2 & 29 Mount Maunganui Whakatane	2 & 29 Tauranga
2 Tauranga	29 Mount Maunganui
29 Hamilton	2 Whakatane

State Highway 30:

30/3 at Te Kuiti:	30/32 at Whakamaru:	30/1 north of Atiamuri:	30/5 south of Rotorua: (near Waipa Mill)
3 Hamilton Waitomo Caves	32 Tokoroa	1 Hamilton	5 & 30 Rotorua
30 Whakamaru	30 Te Kuiti	30 Rotorua	30 Atiamuri
	Atiamuri		
3 New Plymouth	32 Turangi National Park	1 Taupo	5 Taupo

30/5 south of Rotorua: (Old Taupo Road)	30/30A at Rotorua: (Sala Street)	30/33 north of Te Ngae:	30/34 at Kawerau Road:
5 Hamilton	30 Whakatane Tauranga	30 Rotorua	30 Rotorua
30 City Centre Whakatane	30A City Centre Hamilton	33 Tauranga	34 Kawerau
5 & 30 Atiamuri Taupo	30 Atiamuri Taupo	30 Whakatane	30 Whakatane

30/34 west of Te Teko: (Grieve Road)	30/2 at Awakeri:
30 Rotorua	2 Tauranga
34 Kawerau	30 Rotorua
34 Tauranga	30 Whakatane
30 Whakatane	2 Gisborne

State Highway 30A:

30A/5 at Rotorua: (Pukuatua Street)	30A/30 at Rotorua: (Sala Street)
5 Hamilton	30 Whakatane Tauranga
30A City Centre Whakatane	30A City Centre Hamilton
5 Taupo	30 Atiamuri Taupo

State Highway 31:

31/3 at Otorohanga:	31 at Kawhia: (31 ENDS at Kawhia)
3 Hamilton	31 Otorohanga
31 Kawhia	
3 New Plymouth Waitomo Caves	

State Highway 32:

32/1 at Tokoroa:	32/30 at Whakamaru:	32/41 at Kuratau:
1 Hamilton	32 Tokoroa	41 Taumarunui
32 Turangi National Park	30 Te Kuiti	32 Tokoroa
	Atiamuri	
1 Taupo	32 Turangi National Park	41 Turangi National Park

State Highway 33:

33/30 north of Te Ngae:	33/2 at Paengaroa:
30 Rotorua	2 Tauranga
33 Tauranga	33 Rotorua
30 Whakatane	2 Whakatane

State Highway 34:

34/30 at Kawerau Road:	34/30 west of Te Teko: (Grieve Road)	34/2 north of Edgecumbe: (Awaiti Sth Road)
30 Rotorua	30 Rotorua	2 Tauranga
34 Kawerau	34 Kawerau	34 Rotorua
	34 Tauranga	
30 Whakatane	30 Whakatane	2 Whakatane

State Highway 35:

35/2 at Opotoki:	35/2 at Makaraka:
2 Whakatane	2 Whakatane
35 Te Araroa	35 Gisborne Te Araroa
2 Gisborne	2 Napier

State Highway 37:

37/3 at Hangatiki:	37 at Waitomo Caves: (37 ENDS at Waitomo Caves)
3 Hamilton	37 Hamilton New Plymouth
37 Waitomo Caves	
3 New Plymouth	

State Highway 38:

38/5 at Waiotapu:	38 at Ruatahuna: (38 ENDS at Ruatahuna)	38 at Waikaremoana: (38 ENDS at Waikeremoana)	38/2 at Wairoa:
5 Rotorua	38 Rotorua Taupo	38 Wairoa	2 Gisborne
38 Waikeremoana	Waikeremoana Wairoa	Murupara	38 Waikaremoana
5 Taupo			2 Napier

State Highway 41:

41/4 at Manunui:	41/32 at Kuratau:	41/47 at Tokaanu:	41/1 at Turangi:
4 Hamilton	41 Taumarunui	41 Taumarunui	1 Taupo
41 Turangi	32 Tokoroa	47 National Park	41 Taumarunui National Park
4 Natonal Park	41 Turangi National Park	41 Turangi	1 Palmerston Nth

State Highway 43:

43/3 at Stratford:	43/4 at Taumarunui:
3 New Plymouth	4 Hamilton
43 Taumarunui	43 Stratford
3 Wanganui	4 National Park

State Highway 45:

45/3 at New Plymouth:	45/3 at Hawera:
3 Hamilton	3 New Plymouth
45 Opunake	45 Opunake
3 Wanganui	3 Wanganui

State Highway 46:

46/1 at Rangipo:	46/47 north of Taurewa:
1 Taupo	4 7 Turangi
46 National Park	46 Rangipo
1 Palmerston Nth	47 National Park

State Highway 47:

47/41 at Tokaanu:	47/46 north of Taurewa:	47/48 at Chateau Tongariro intersection:	47/4 at National Park:
41 Taumarunui	47 Turangi	47 Turangi	4 Hamilton
47 National Park	46 Rangipo	48 Chateau Tongariro Whakapapa	47 Turangi
41 Turangi	47 National Park	47 National Park	4 Wanganui

State Highway 48:

48/47 at Chateau Tongariro intersection:	48 at Chateau Tongariro: (48 ENDS at Chateau Tongariro)
47 Turangi	48 Turangi National Park
48 Chateau Tongariro Whakapapa	
47 National Park	

State Highway 49:

49/4 north of Raetihi:	49/1 at Waiouru:
4 National Park	1 Taupo
49 Ohakune Waiouru	49 Ohakune National Park
4 Wanganui	1 Palmerston Nth

State Highway 50:

50/2 at Napier: (Hyderabad Road)	50/2 at Napier: (Tardale Road)	50/2 south of Takapau:
2 Taupo Gisborne	2 Taupo Gisborne	2 Napier Hastings
50 Port	50 Taradale (ALTERNATIVE ROUTE SOUTH)	50 Napier (ALTERNATIVE ROUTE)
2 & 50 Napier Hastings	2 Napier Hastings	2 Palmerston Nth

State Highway 53:

53/2 at Featherston:	53 at Martinborough: (53 ENDS at Martinborough)
2 Masterton	50 Featherston
53 Martinborough	
2 Wellington	

State Highway 54:

54/1 at Vinegar Hill:	54/3 west of Palmerston North:
1 Taupo	3 Wanganui
54 Fielding	54 Fielding
1 Palmerston Nth	3 Palmerston Nth

State Highway 56:

56/3 at Palmerston Nth:	56/57 at Makerua:
3 Wanganui	57 Woodville
56 Levin	56 Palmerston Nth
3 Woodville	57 Levin

State Highway 57:

57/3 east of Ashhurst:	57/56 at Makerua:	57/1 south of Levin:
3 Palmerston Nth	57 Woodville	1 Taupo
57 Levin	56 Palmerston Nth	57 Palmerston Nth
3 Woodville	57 Levin	1 Wellington

State Highway 58:

58/1 at Paremata:	58/2 at Haywards:
1 Palmerston Nth	2 Masterton
58 Hutt Valley	58 Porirua
1 Wellington	2 Wellington

FIGURE 7.14.2 SOUTH ISLAND STATE HIGHWAY MAP

7.12.2 STAGE AND DESTINATION NAMES FOR USE ON SOUTH ISLAND STATE HIGHWAY GUIDE SIGNS

State Highway 1:

1 at Picton:	1/6 at Blenheim:	1/7 at Waipara:	1/71 north of Kaiapoi:
1 Christchurch Nelson West Coast	1 Picton Wellington Ferry	1 Picton	71 Rangiora
	6 Nelson West Coast	7 West Coast (via Lewis Pass)	
	1 Christchurch	1 Christchurch	1 Christchurch

1/73 at Christchurch: (Yaldhurst Road)	1/73 at Hornby: (Carmen Road/Shands Road)	1/74 at Christchurch: (Johns Road)	1/77 at Ashburton:
1 Picton	1 & 73 Picton West Coast (via Arthurs Pass)	1 Picton	1 Christchurch
73 West Coast (via Arthurs Pass)	City Centre 73 Lyttelton	City Centre 74 Lyttelton	77 Darfield
City Centre	Lincoln		
1 & 73 Timaru Lyttelton	1 Timaru	1 Timaru	1 Timaru

1/78 at Timaru: (Sefton Street East)	1/79 at Rangitata:	1/8 at Washdyke:	1/82 south of Hook:
1 Christchurch	1 Christchurch	1 Christchurch	1 Timaru
78 Port	79 Mount Cook	8 Mount Cook	82 Kurow
1 Dunedin	1 Timaru	1 Timaru	1 Dunedin

1/83 at Pukeuri Junction:	1/85 at Palmerston:	1/87 near Mosgiel:	1/88 at Dunedin: (Castle Street)
1 Timaru	1 Timaru	1 Dunedin	1 Timaru
83 Omarama	85 Alexandra	87 Ranfurly	88 Port Chalmers
1 Dunedin	1 Dunedin	1 Invercargill	1 Invercargill

1/8 south of Milton:	1/90 north of Gore:	1/94 at Gore:	1/96 south of Mataura:
1 Dunedin	1 Dunedin	1 Dunedin	1 Dunedin
8 Queenstown	90 Raes Junction	94 Milford Sound	96 Ohai
1 Invercargill	1 Invercargill	1 Invercargill	1 Invercargill

1/98 east of Invercargill: (Dacre)	1/6 at Invercargill:	1 at Bluff:
1 Dunedin	1 Dunedin	1 Invercargill
98 Lorneville	6 Queenstown	
1 Invercargill	1 Bluff	

State Highway 6:

6/1 at Blenheim:	6/60 at Richmond:	6/63 at Renwick:	6/63 at Kawatiri Junction:
1 Picton Wellington Ferry	6 Nelson	6 Picton	6 Nelson
6 Nelson West Coast	60 Collingwood	63 West Coast	63 Picton
1 Christchurch	6 West Coast	6 Nelson	6 West Coast

6/65 at O'Sullivans Bridge:	6/69 at Inangahua Junction:	6/67 south of Wesport:	6/7 at Greymouth:
6 Nelson	6 Nelson	6 Nelson	6 Westport
65 Christchurch (via Lewis Pass)	69 Reefton Greymouth	67 Karamea	7 Christchurch (Lewis Pass) Nelson
6 Greymouth Westport	6 Wesport	6 Greymouth	6 Haast

6/73 at Kumara Junction:	6 at Haast:	6/84 south of Albert Town:	6/8A west of Luggate:
6 Greymouth	6 Greymouth	6 West Coast (via Haast Pass)	6 West Coast (Haast Pass)
73 Christchurch (via Arthurs Pass)	-	89 Wanaka	8A Dunedin Mount Cook
6 Haast	6 Queenstown	6 Queenstown	6 Queenstown

6/8B north of Cromwell:	6/6A west of Frankton:	6/94 at Lumsden:	6/96 at Winton:
6 West Coast (via Haast Pass)	6 Cromwell West Coast (via Haast Pass)	6 Queenstown	6 Queenstown
8B Dunedin Mount Cook Milton	6A Queenstown	94 Milford Sound	96 Ohai
		94 Gore	96 Mataura
6 Queenstown	6 Invercargill	6 Invercargill	6 Invercargill

6/98/99 at Lomeville:	6/1 at Invercargill:
6 Queenstown	1 Dunedin
99 Tuatapere	6 Queenstown
6 Invercargill	1 Bluff
98 Dacre	

State Highway 6A:

6A/6 west of Frankton:	6A at Queenstown: (6A ENDS at Queenstown)
6 Cromwell West Coast (via Haast Pass)	6A Cromwell West Coast Invercargill
6A Queenstown	
6 Invercargill	

State Highway 7:

7/1 at Waipara:	7/70 at Red Post Corner:	7/7A at Hanmer turnoff:	7/65 at Springs Junction:
1 Picton	7 West Coast (via Lewis Pass)	7 West Coast (via Lewis Pass)	7 Westport Greymouth
7 West Coast (via Lewis Pass)	70 Kaikoura	7A Hanmer Springs	65 Nelson
1 Christchurch	7 Christchurch	7 Christchurch	7 Christchurch (via Lewis Pass)

7/69 at Reefton:	7/6 at Greymouth:
7 Greymouth	6 Wesport
69 Westport Nelson	7 Nelson Christchurch (via Lewis Pass)
7 Christchurch (via Lewis Pass)	6 Haast

State Highway 7A:

7A/7 at Hanmer turnoff:	7A at Hanmer Springs: (7A ENDS at Hanmer Springs)
7 West Coast (via Lewis Pass)	7A Christchurch West Coast (via Lewis Pass)
7A Hanmer Springs	
7 Christchurch	

State Highway 8:

8/1 at Washdyke:	8/79 at Fairlie:	8/80 at Pukaki:	8/83 at Omarama:
1 Christchurch	8 Timaru	8 Timaru Christchurch	8 Mount Cook
8 Mount Cook	79 Geraldine Christchurch	80 Mount Cook	83 Oamaru
1 Timaru	8 Mount Cook	8 Queenstown	8 Queenstown

8/8A south of Tarras:	8/8B north of Cromwell:	8/85 at Alexandra:	8/90 at Raes Junction:
8 Mt. Cook	8 Mount Cook	8 Queenstown	8 Queenstown
8A West Coast (via Haast Pass)	8B West Coast (via Haast Pass) Queenstown	85 Palmerston	90 Gore
8 Dunedin Queenstown	8 Dunedin	8 Dunedin	8 Dunedin

8/1 south of Milton:
1 Dunedin
8 Queenstown
1 Invercargill

State Highway 8A:

8A/8 south of Tarras:	8A/6 west of Luggate:
8 Mount Cook	6 West Coast (via Haast Pass)
8A West Coast (via Haast Pass)	8A Dunedin Mount Cook
8 Dunedin Queenstown	6 Queenstown

State Highway 8B:

8B/6 north of Cromwell:	8B/8 north of Cromwell:
6 West Coast (via Haast Pass)	8 Mount Cook
8B Dunedin Mount Cook Milton	8B West Coast (via Haast Pass) Queenstown
6 Queenstown	8 Dunedin

State Highway 60:

60/6 at Richmond:	60 at Collingwood: (60 ENDS at Collingwood)
6 Nelson	60 Richmond
60 Collingwood	
6 West Coast	

State Highway 63:

63/6 at Renwick:	63/6 at Kawatiri Junction:
6 Picton	6 Nelson
63 West Coast	63 Picton
6 Nelson	6 West Coast

State Highway 65:

65/6 at O'Sullivans Bridge:	65/7 at Springs Junction:
6 Nelson	7 Christchurch (via Lewis Pass)
65 Christchurch (via Lewis Pass)	65 Nelson
6 Westport Greymouth	7 Westport Greymouth

State Highway 67:

67/6 south of Westport:	67/67A at Westport:	67 at Mokihinui: (67 ENDS at Mokihinui)
6 Nelson	67 Karamea	Karamea
67 Karamea	67A Cape Foulwind	-
6 Greymouth	67 Greymouth Nelson	67 Westport

State Highway 67A:

67A/67 at Westport:	At Cape Foulwind: (67A ENDS at Cape Foulwind)
67 Nelson Greymouth	67A Westport
67A Cape Foulwind	
67 Karamea	

State Highway 69:

69/6 at Inangahua Junction:	69/7 at Reefton:
6 Nelson	7 Greymouth
69 Reefton Greymouth	69 Westport Nelson
6 Wesport	7 Christchurch (via Lewis Pass)

State Highway 70:

70/7 at Red Post Corner:	70 at Waiau: (70 ENDS at Waiau)
7 West Coast (via Lewis Pass)	70 Culverden
70 Kaikoura	-
7 Christchurch	Kaikoura

State Highway 71:

71/1 north of Kaiapoi:	71 at Rangiora: (71 ENDS at Rangiora)
71 Rangiora	71 Kaiapoi
1 Christchurch	

State Highway 73:

73/74 at Christchurch: (Waltham/Brougham/Opawa intersection)	73/75 at Christchurch: (Southern Motorway)	73/1 at Hornby: (Carmen Road/Shands Road)	73/1 at Christchurch: (Yaldhurst Road)
City Centre 74 Picton	73 West Coast Timaru	1 & 73 Picton West Coast (via Arthurs Pass)	1 Picton
73 Akaroa Timaru West Coast	75 Akaroa	1 Timaru	73 West Coast (via Arthurs Pass)
		Lincoln	City Centre
74 Lyttelton	City Centre 73 Lyttelton	City Centre 73 Lyttelton	1 & 73 Timaru Lyttelton

73/77 At Darfiled:	73/6 at Kumara Junction:
73 West Coast (via Arthurs Pass)	6 Greymouth
77 Ashburton	73 Christchurch (via Arthurs Pass)
73 Christchurch	6 Haast

State Highway 74:

74/1 at Christchurch: (Johns Road)	74/73 at Christchurch: (Waltham/Brougham/Opawa intersection)	74 at Lyttelton: (74 ENDS at Lyttelton)
1 Picton	City Centre 74 Picton	74 Christchurch
74 Lyttelton City Centre	73 West Coast Akaroa Timaru	
1 Timaru	74 Lyttelton	

State Highway 75:

75/73 at Christchurch: (Southern Motorway)	75 at Akaroa: (75 ENDS at Akaroa)
City Centre 73 Lyttelton	75 Christchurch
75 Akaroa	
73 West Coast Timaru	

State Highway 77:

77/1 at Ashburton:	77/73 at Darfield:
1 Christchurch	73 West Coast (via Arthurs Pass)
77 Darfield	77 Ashburton
1 Timaru	73 Christchurch

State Highway 78:

78/1 at Timaru: (Sefton Street East)	78 at Port Timaru: (78 ENDS at Port)
1 Christchurch	78 City Centre
78 Port	
1 Dunedin	

State Highway 79:

79/1 at Rangitata:	79/8 at Fairlie:
1 Christchurch	8 Mount Cook
79 Mount Cook	79 Geraldine Christchurch
1 Timaru	8 Timaru

State Highway 80:

80/8 at Pukaki:	80 at Mount Cook: (80 ENDS at Mount Cook)
8 Timaru Christchurch	80 Christchurch Queenstown
80 Mount Cook	
8 Queenstown	

State Highway 82:

82/1 south of Hook:	82/83 at Kurow:
1 Timaru	83 Omarama
82 Kurow	82 Timaru
1 Dunedin	83 Oamaru

State Highway 83:

83/1 at Pukeuri Junction:	83/82 at Kurow:	83/8 at Omarama:
1 Timaru	83 Oamaru	8 Mount Cook
83 Omarama	82 Timaru	83 Oamaru
1 Dunedin	83 Omarama	8 Queenstown

State Highway 84:

84/6 south of Albert Town:	84 at Wanaka: (84 ENDS at Wanaka)
6 West Coast (via Haast Pass)	84 West Coast (via Haast Pass) Queenstown
89 Wanaka	
6 Queenstown	

State Highway 85:

85/1 at Palmerston:	85/87 at Kyeburn:	85/8 at Alexandra:
1 Timaru	85 Palmerston	8 Queenstown
85 Alexandra	87 Mosgiel	85 Palmerston
1 Dunedin	85 Alexandra	8 Dunedin

State Highway 87:

87/1 near Mosgiel:	87/85 at Kyeburn:
1 Dunedin	85 Alexandra
87 Ranfurly	87 Mosgiel
1 Invercargill	85 Palmerston

State Highway 88:

88/1 at Dunedin: (Castle Street)	88 at Port Chalmers: (88 ENDS at Port)
1 Timaru	88 Dunedin
88 Port Chalmers	
1 Invercargill	

State Highway 90:

90/8 at Raes Junction:	90/1 north of Gore:
8 Queenstown	1 Dunedin
90 Gore	90 Raes Junction
8 Dunedin	1 Invercargill

State Highway 94:

94/1 at Gore:	94/6 at Lumsden:	94/95 at Te Anau:	94 at Milford Sound: (94 ENDS at Milford Sound)
1 Dunedin	94 Gore	94 Gore	94 Gore
94 Milford Sound	6 Queenstown	95 Manapouri	
	6 Invercargill		
1 Invercargill	94 Milford Sound	94 Milford Sound	

State Highway 95:

95/94 at Te Anau:	95 at Manapouri: (95 ENDS at Manapouri)
94 Milford Sound	95 Te Anau
95 Manapouri	
94 Gore	

State Highway 96:

96/1 south of Mataura:	96/6 at Winton:	96 at Ohai: (96 ENDS at Ohai)
1 Dunedin	96 Mataura	96 Winton
96 Ohai	6 Queenstown	-
	6 Invercargill	
96 Invercargill	96 Ohai	Tuatapere

State Highway 98:

98/1 east of Invercargill: (Dacre)	98/6/99 at Lorneville:
1 Dunedin	6 Queenstown
98 Lorneville	98 Dacre
	99 Tuatapere
1 Invercargill	6 Invercargill

State Highway 99:

99/6/98 at Lorneville:	99 at Clifden: (99 ENDS at Clifden)
6 Queenstown	Ohai
99 Tuatapere	-
98 Dacre	
6 Invercargill	99 Invercargill

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