Supplement to AS 1742.9

Manual of uniform traffic control devices

Part 9: Bicycle facilities

May 2024

Government of South Australia
Department for Infrastructure and Transport

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1	27 May 2024	New supplement compiled from Operational Instructions 9.1, 9.2, 9.3, 9.4 and 9.5, and Code of Technical Requirements, Section 3.7

Approvals record

Approvers	Position	Date	Signature
Stephen Pascale	Manager, Traffic Services	23 May 2024	Digital Approval 36587

We acknowledge the Traditional Custodians of the Country throughout South Australia and recognise their continuing connection to land and waters. We pay our respects to the diversity of cultures, significance of contributions and to Elders past, present and emerging.

Contents

Part 1 Introduction

All road authorities across Australia are working towards harmonisation between States and Territories in how road networks are managed. In order to achieve this, the Austroads Guide to Traffic Management and Australian Standards relating to traffic management have been adopted to assist in providing that level of consistency and harmonisation across all jurisdictions. This means that these Austroads Guides and the Australian Standards are the primary technical references.

Jurisdictional supplements identify where practices differ from the guidance in the national standards and/or provide additional information where required.

1.1 South Australia's supplements

The Department for Infrastructure and Transport (the Department) is developing a series of supplements to the parts of Australian Standard *AS 1742 Manual of Uniform Traffic Control Devices*. As these supplements are published for use, the Department's *Code of Technical Requirements*, *Standards and Guidelines* web page, *Operational Instructions* and other publications will be updated as necessary to reference the new supplement and remove duplicated content. Users are reminded to always access the live versions of these documents via the Department's *Technical Documents - Standards and Guidelines* web page (https://www.dit.sa.gov.au/standards/standards_and_guidelines) to ensure they are accessing the latest information, and are encouraged to subscribe to the web page to be notified of changes periodically.

The Department's *Code of Technical Requirements* sets out the mandatory requirements for variations from the Australian Standards and Austroads Guides for the use of traffic control devices in South Australia. The Code references various Departmental documents including this supplement and requires road authorities to comply with the variations and additional information to the Australian Standards and Austroads Guides contained in this supplement.

Australian Standards *AS 1742.9 Manual of uniform traffic control devices - Part 9: Bicycle Facilities* is a nationally agreed standards document outlining the use of traffic control devices related to pedestrians on the road network and has been adopted by all jurisdictions.

This document is South Australia's supplement to *AS 1742.9 (2018)* and has been prepared and authorised by the Department.

1.2 Approvals for the use of traffic control

When used in accordance with *AS 1742.9 (2018)* and the variations and additions within this supplement, these traffic control devices may be installed under the Minister's *Instrument of General Approval and Delegation to Council*, or with the approval of the Department's Network Management Services. Traffic control devices which vary from this supplement require the separate approval of the Department's Manager, Traffic Services for each location prior to installation.

Refer to the Department's *Code of Technical Requirements* for further details on the legal requirements for the use of traffic control devices.

1.3 Structure of this document

Part 2 of this document provides the details of the supplement information as follows:

- ***DEPARTURE***: Where South Australia's practices differ from the guidance in the Australian Standard. Where this occurs, these differences or 'Departures' will be highlighted. The departure information takes precedence over the Australian Standard clause.
- ***ADDITIONAL INFORMATION***: All information not identified as a departure provides further guidance to the Australian Standard and is read and applied with the Australian Standard clause.

Where a clause does not appear in the body of this supplement, the Australian Standard requirements shall be followed.

Part 3 of this document, the Appendices, contain additional information in relation to pedestrian facilities not specifically covered in *AS 1742.9.*

Part 2 Details of Supplement Information

General (Applicable to all Clauses/Sections)

- Sign specification details of signs for use in South Australia are provided in the DIT *Sign Index* and the Australian Standard *AS 1743 Road Signs - Specifications*. The DIT *Sign Index* provides the sign specification details of signs which are not included in the Australian Standards but have been developed for use in South Australia. For all other sign specification details, refer to *AS 1743*. Signs in *AS 1743* which shall not be used in South Australia are listed in the Department's *Code of Technical Requirements (the Code)*.
- Non-commercial users can access the Australian Standards for free, up to three times each year, via Standards Australia's *Reader Room service*. The platform is not intended for regular users who need access to Standards as part of their work, but to support the Australian community seeking occasional access for private use.
- Additional information on pavement marking for bicycle lanes, bicycle paths and shared paths is provided within the Department's *Pavement Marking Manual (PMM)*.
- Standard drawings for bicycle facilities are provided at the Department's *Technical Documents - Standards and Guidelines* web page.
- Regulations under the *Road Traffic Act 1961* including the *Australian Road Rules* (ARR) can be accessed at the *South Australian Legislation* web page.

Section 2 Bicycle Provisions on Arterial Roads and Local Streets

Clause 2.2 Signs

Clause 2.2(d) No Hook Turn by Bicycles (R2-22) — *ADDITIONAL INFORMATION*

The following sign shall only be used with separate approval from the Commissioner of Highways or authorised delegate:

- R2-22 No hook turn by bicycles.

R2-22

Clause 2.2(f) Bicycle LANE (R7-1-4) — *ADDITIONAL INFORMATION*

R7-1-4 signs shall be installed in accordance with figures A1 to A9 in Appendix A of this supplement.

For size of the Bicycle Lane R7-1-4 regulatory signs refer to Appendix C of *AS 1742.9*.

Bicycle Lane signs should not be duplicated in the median of a multi-lane road.

R7-1-4

Figures A1 to A9 in this supplement should be used to determine the placement of signs.

Refer to AS 1742.9 Appendix B2 for further details about sign placement

Clause 2.2(g) Bicycle lane supplementary plates

ADDITIONAL INFORMATION

Supplementary times sign (R9-1-1 and R9-1-2) shall be one size category smaller than the Bicycle Lane R7-1-4 regulatory sign to match sign widths, for example a R7-1-4 B size would go with a R9-1-1A, or R9-1-2A size.

R7-4 signs shall be used to mark the end of a bicycle lane. Bicycle lanes may also legally terminate at an intersection, removing the need for the placement of R7-1-4 and R7-4 combination signs.

The term 'school days' may only be used on the times of operation module (R9-SA57) to indicate a part time bicycle lane on roads other than those under the care, control, and management of the Commissioner of Highways. The use of 'Mon – Fri' is preferred, and the term 'school days' should generally be avoided and limited to situations where weekday operation would cause unacceptable restrictions to parking.

'School days' shall only be used where a bicycle facility specifically caters for school traffic, and there is no demand for a bicycle facility at other times.

State school term dates are published on the South Australian Department for Education and Child Development web page (http://www.decd.sa.gov.au). Where a bicycle facility is intended to specifically cater for private school traffic, variations from the published term dates may contribute to confusion about times of operation, particularly as the bicycle facility may be remote from the school and it may not be obvious to drivers whether the school is open.

R9-1-1

R9-1-2

R9-SA57

ARR Rule 153(4)

Clause 2.2(j) Bicycle Warning (W6-7)

Clause 2.2(k) Warning sign supplementary plates

ADDITIONAL INFORMATION

The combined use of Bicycle Warning signs (W6-7) and Next x km (W8-17-1) or Next x m (W8-17-2) signs may be placed on sections of road where:

- cyclists may be present, and
- motor vehicle sight distance is significantly limited due to horizontal and/or vertical geometry, and
- single traffic lanes are less than 5.0 m wide in each direction measured from separation line to edge of seal including sealed shoulder.

W6-7

W8-17-1 Series

Supplementary distance plate W8-17-1 shall be used in combination with W6-7 signs where the above installation criteria is met and continuous hazardous sections of road extend over 1 km in length.

W8-17-1

Distances shown on the W8-17-1 sign shall be shown in whole kms.

W8-17-2 Series

The supplementary distance plate W8-17-2 shall be used in combination with W6-7 sign where isolated sections of hazardous section of road exist less than 1 km in

W8-17-2

length. Where two or more sites are closely located within 1 km of each other one warning sign may be used to identify both locations.

Distances shown on the W8-17-2 series of signs shall be:

- Up to 500 m – to the nearest 100 m.
- Between 500 m and 1 km – to the nearest half a km.

Location

Tight horizontal curves in rural road alignments often have existing warning signs including 'Advisory Speed' and 'Curve' signs placed in advance of the curve advising the alignment type and advisory speed of the section of road ahead. The location of these signs on the approach to the hazardous section of road should have priority over any bicycle warning signs and should therefore remain in advance of new bicycle warning signs.

Bicycle warning signs should not be placed closer than 0.6 times the advisory speed of approaching vehicles from any existing advisory speed signs and be located in advance of the tight curve section of road.

Should the hazardous section of road have no advisory speed warning signs on its approach, then bicycle warning signs shall be placed at a distance 0.6 times the respective speed zone for that section of road (0.6 x V) from the hazardous curve tangent point.

Clause 2.3 Pavement Markings

Clause 2.3.1(d) Bicycle Storage Area

Refer to Austroads *Guide to Road Design, Part 4: Intersections and Crossings: General Appendix B, Section B.6 - Cyclist Facilities at Signalised Intersections* for information on head start and expanded storage areas for cyclists at signalised intersections.

Austroads Guide to Road Design, Part 4 Section B.6

PMM Section 3.3.27.4

Appropriate checks must be made to ensure that the traffic signal phasing accommodates the use of advanced areas for cyclists or if it is affected by their implementation.

Clause 2.3.2 Other pavement markings

Clause 2.3.2(b) Bicycle lane safety strip

ADDITIONAL INFORMATION

Refer to DIT *Pavement Marking Manual* for the safety strip dimensions

PMM Section 3.3.4.1

Shared Lane Marking (Sharrow)

ADDITIONAL INFORMATION

Sharrows may be used to:

- Assist cyclists with lateral positioning on roads with on-street parallel parking in order to reduce the chance of being hit by an opening door of a parked vehicle.
- Assist cyclists with lateral positioning on roads that are too narrow for a motor vehicle and a bicycle to travel side by side in the same direction.

- Assist cyclists with navigating a designated bicycle route.
- Alert road users that they are on a designated bicycle route.
- Alert road users of the lateral location cyclists are likely to occupy within the roadway.
- Encourage safe passing of cyclists by motorists.

PMM Section 2.1.8.5

Straight, Left and Right Shared Lane Markings (Sharrow)

DIT *Standard Drawing S-7349* Sheet 2 recommends the lateral and longitudinal placement of Shared Lane Markings (Sharrows).

DIT Standard Drawing S-7349 Sheet 2

The recommended lateral placement of Shared Lane Marking (Sharrow) is outlined in the Kerb Offsets Table on this drawing and is dependent on both the width of the road and existing parking restrictions. Where road width or parking restrictions are variable along a length of road, consideration should be given to adopt a consistent lateral placement to avoid tracking deviations and encourage cyclists to follow a straight course.

Sharrows are relatively new traffic control device in South Australia, so it is important to educate the driving, riding and local residential community about the devices via a communication plan when a bicycle route is developed to include Sharrows.

Issues that may be relevant to discuss in a communication plan include:

- Why Sharrows are being applied to a particular road
- Legal relevance of Sharrows
- How they may assist the movement of cyclists
- What drivers need to do when using a road with Sharrows

Approaches to Zebra Crossings

ADDITIONAL INFORMATION

Refer to DIT *Supplement to AS 1742.10* Appendix E for the treatment of bicycle lanes on approaches to on-street zebra crossings.

DIT Supplement to AS 1742.10

Clause 2.3.3 Pavement colour

ADDITIONAL INFORMATION

Indiscriminate use of green coloured pavement should be avoided. Only highlighting those areas of the bicycle lane network where there is 'potential risk' of motor vehicle and pedestrian conflict with cyclists will ensure the effectiveness use of green coloured pavement surfacing.

PMM Section 3.3.27

Austroads GRD Part 4

Areas of ‘potential conflict’ between motor vehicle and bicycle traffic include those segments of on-road bicycle lane where motor vehicle traffic is legally permitted to

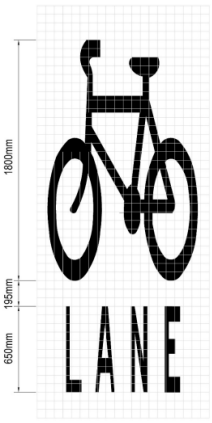
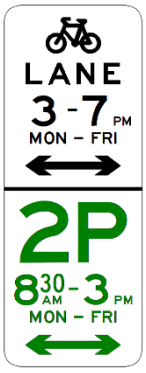
cross double continuity lines. Areas of conflict between cyclists and pedestrians may include areas where parallel parking exists with high parking turn-over. For advice on pavement marking products approved for use on DIT roads see: http://www.dpti.sa.gov.au/contractor_documents/specifications	
Clause 2.4 Bicycle Provisions Mid-Block	
Clause 2.4.1 Bicycle lane (full time)	***DEPARTURE***
Where a full time bicycle lane is designated by pavement markings instead of signs as per *AS 1742.9* Figure 2.2(2) and *AS 1742.9* Figure 2.2(3), and the DIT *Pavement Marking Manual* Section 2.1.8.4.2, pavement markings shall be located where R7-1-4 signs would usually be situated. These include at the beginning and end of the bicycle lane, and at other locations where drivers entering or leaving the road need to be informed of the presence of the bicycle lane such as the departure side of intersections, shopping centre accesses, and after U-turn locations. Intermediate or repeater pavement markings may be installed where additional reinforcement of the presence of the bicycle lane is required, such as sections of road where there is a tendency for drivers to seek on-street parking. For consistency with the markings designating the beginning of the lane, and to distinguish the regulatory lane markings from advisory bicycle lane markings or part time bicycle lane markings, repeater pavement markings shall comprise of the bicycle symbol and the word “lane”, as per DIT *Pavement Marking Manual* Section 2.1.8.4.2. See also figures A1 to A9 in Appendix A of this supplement for placement of bicycle lane markings. Note that this is a variation from *AS 1742.9 (2018)* Figure 2.4, due to the No Stopping provisions associated with bicycle lanes in South Australia and the need to reinforce the regulatory status of the bicycle lane in the absence of signs.	**ARR Rule 153**  **PMM Section 2.1.8.4.2** **Appendix A of this supplement**
The No Stopping provisions for bicycle lanes are stated in ARR Rule 187(2), which prohibits stopping in a bicycle lane unless the driver is driving a public bus, public minibus or taxi, and is dropping off or picking up passengers. *AS 1742.9 (2018)* clause 2.4.1 states “No-stopping signs or painted yellow edge lines shall be provided where needed to control vehicles from stopping within the lane”. Some other states allow stopping in bicycle lanes and therefore require the use of these No Stopping controls to prohibit stopping where necessary. However, in South Australia, the No Stopping provisions are as stated in ARR 187(2) and no additional controls are necessary. As such, No Stopping signs or painted yellow edge lines shall not be used in full time bicycle lanes. The use of these devices may cause confusion, with the potential for drivers to mistakenly interpret their use as implying that stopping is permitted beyond their extents.	**ARR Rule 187(2)**

Figure 2.4	**Bicycle Lane (full-time) adjacent to kerb**	***DEPARTURE***
Figure 2.4 indicates that the spacing of bicycle lane repeater pavement markings as "as required". Pavement markings are to be located adjacent each sign. See also the ***DEPARTURE*** from Clause 2.4.1 in relation to No Stopping signs.		
Clause 2.4.2	**Bicycle lane (part time)**	***DEPARTURE***
Bicycle Lane Parking Control signs (R5-SA101) are available in two formats and shall be used on bicycle lanes where other parking restrictions are to be displayed. R5-SA101 series signs shall replace all existing parking control signs. The decision to use R5-SA101-1N or R5-SA101-1W signs is to be determined by the unique characteristics of the site. It is anticipated R5-SA101-1N signs will be used should there be horizontal space restrictions. There would be some benefit in applying the type of layout of the signs consistently along a particular route. All parking control signs are determined and maintained by councils. Refer to Appendix B of this supplement for various sign combinations. If there are other signs present, they need to be separated by 0.6V metres in accordance with A*S 1742.11*, where V is the 85th percentile speed of the traffic. Existing sign posts should be fully utilised when installing new signs, and multi-panel signs such as R5-SA101-2W two, three and four panel signs are recommended to replace all existing parking signs. Parking control signs need to be placed at a 30 degree angle to the kerb facing oncoming traffic as per *AS 1742.11*. *AS 1742.9* states “Bicycle pavement symbols are optional on part-time lanes” In South Australia, bicycle pavement symbols shall be located adjacent each sign.		 **R5-SA101-1N***
Figure 2.5	**Part-time Bicycle Lanes**	***DEPARTURE***
Figure 2.5 indicates that the spacing of bicycle lane repeater pavement markings as "as required". Pavement markings are to be located adjacent each sign. See also the ***DEPARTURE*** from Clause 2.4.2 in relation to Parking Control signs.		
Clause 2.5	**Bicycle lane treatments at intersections**	***ADDITIONAL INFORMATION***
Refer Austroads *Guide to Road Design Part 4: Intersections and Crossings – General* Section 9 for details of cyclist crossing treatments, and examples of intersection crossing treatments in Appendix C of this supplement.		**AGRD Part 4 Section 9** **Appendix C of this Supplement**

Section 3 Bicycle Path and Footpath Provisions

Clause 3.2 Signs

Clause 3.2(a)	**Give Way (R1-2)**	*ADDITIONAL INFORMATION*
Give Way (R1-2) signs may be used at the intersection of two paths if it is desired to assign priority to the main path.		
Clause 3.2(e)	**Shared Path (R8-2)**	*ADDITIONAL INFORMATION*
For paths designated for use by horses, Regulatory sign R8-SA100 'Pedestrian, cyclist and horses' may be used. Also refer to the *DIT Supplement to AS 1742.10* Clause 11.3 for the use of multi-user trail warning (W6-SA109) signs.		 **R8-SA100**
Clause 3.2(g)	**Pedestrian Warning (W6-1), etc..**	
The fluoro yellow green Bicycle/Pedestrian Warning sign (W6-SA110) should be used instead of the standard W6-9 as per DIT *Supplement to AS 1742.10* Clause 11.3. Also refer to the *DIT Supplement to AS 1742.10* Clause 11.3 for the use of multi-user trail warning (W6-SA109) signs		 **W6-SA110**

Clause 3.3 Pavement Markings

ADDITIONAL INFORMATION

Pavement markings on footpaths and shared paths

Pavement markings on footpaths and shared paths shall conform to this standard and the DIT *Pavement Marking Manual*).

Pavement markings with an educational, advisory or promotional message intended to enhance users' awareness of the road rules or path safety are not considered to be traffic control devices and may be used.

Where used, these markings shall be skid and slip resistant to the requirements of *AS 4049 Paint and related materials – Pavement marking materials* and the DIT *Pavement Marking Manual* so as not to cause a hazard for path users.

Clause 3.7 Road Crossing Mid-Block

Clause 3.7.1 **Summary of Treatments** *DEPARTURE*

Clause 3.7.2(a) **Bicycle Paths**

Table 3.2 **Bicycle and Shared or Separated Path Treatments at Mid-Block Road Crossings**

Figure 3.6 **Bicycle or Shared Path Crossing a Road at a Pedestrian (Zebra) Crossing)**

Refer to *DIT Supplement to AS 1742.10* Appendix F3. — **DIT Supplement to AS 1742.10 Appendix F3**

Where a shared path crosses a road midblock, a wombat crossing (not zebra crossing) is the preferred treatment.

Clause 3.8 Road Crossings at Intersections

Clause 3.8.1 **Unsignalised intersections** *ADDITIONAL INFORMATION*

Refer to *DIT Supplement to AS 1742.10* Appendix F for priority pedestrian / cyclist treatment across side roads. — **DIT Supplement to AS 1742.10 Appendix F**

Also refer Austroads *Guide to Road Design Part 4: Intersections and Crossings – General* Section 9 for details of cyclist crossing treatments. — **AGRD Part 4 Section 9**

Appendix C Selection of Appropriate Sign Size

Clause C3 General principles for size selection

Clause C3(a) **W6 series** *ADDITIONAL INFORMATION*

W6-7 Series

The appropriate size of the W6-7 warning sign shall be determined by the speed zone of the road that the hazardous section is located. Refer DIT *Operational Instruction 2.38 – Size of Standard Signs*. In most instances throughout the South Mount Lofty Ranges speed zones are 80 km/h or above which warrant ‘C’ size signs at 900 x 900 mm. However, given the majority of the relevant hazardous sections of road in these regions have 25 - 60 km/h advisory speed restrictions placed upon them, ‘B’ sized signs at 750 x 750 mm may be appropriate.

W6-7

Part 3 Appendices

Appendix A Bicycle lane figures

ADDITIONAL INFORMATION

NOTE: All of the following examples of bicycle lane signing assume a speed limit of 50, 60 or 70 km/h.
The abbreviation T.P denotes tangent point.

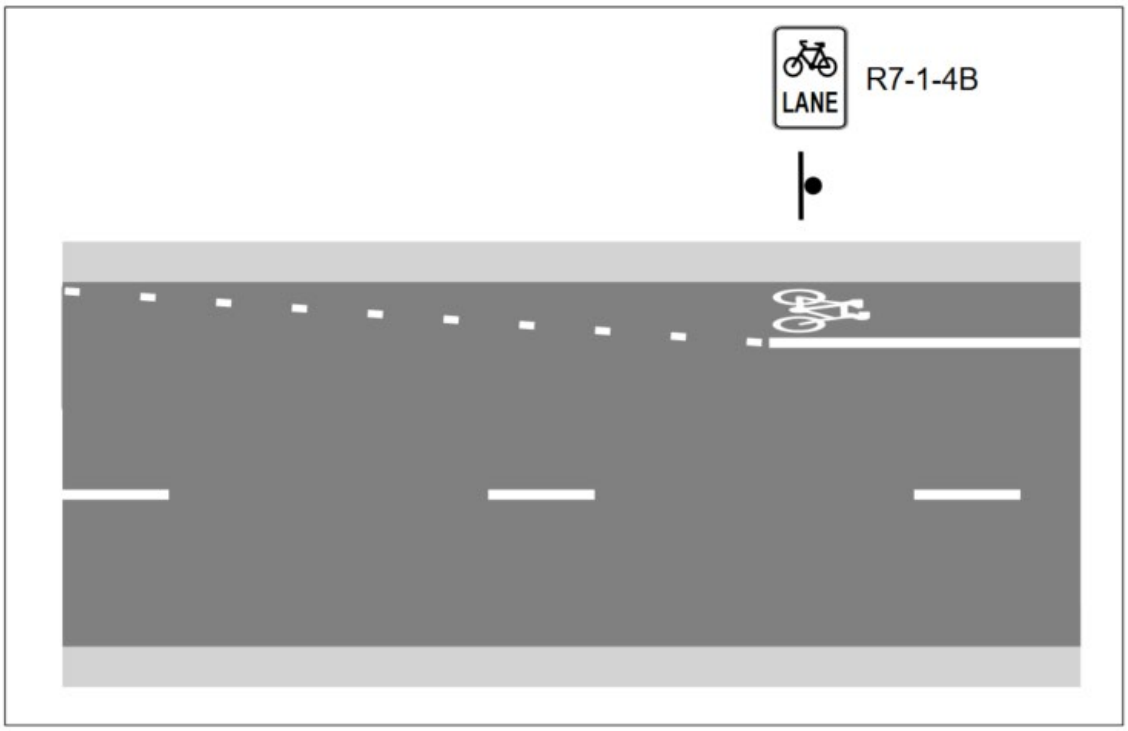


Figure A1 – Start of Bicycle Lane with Taper (mid-block start)

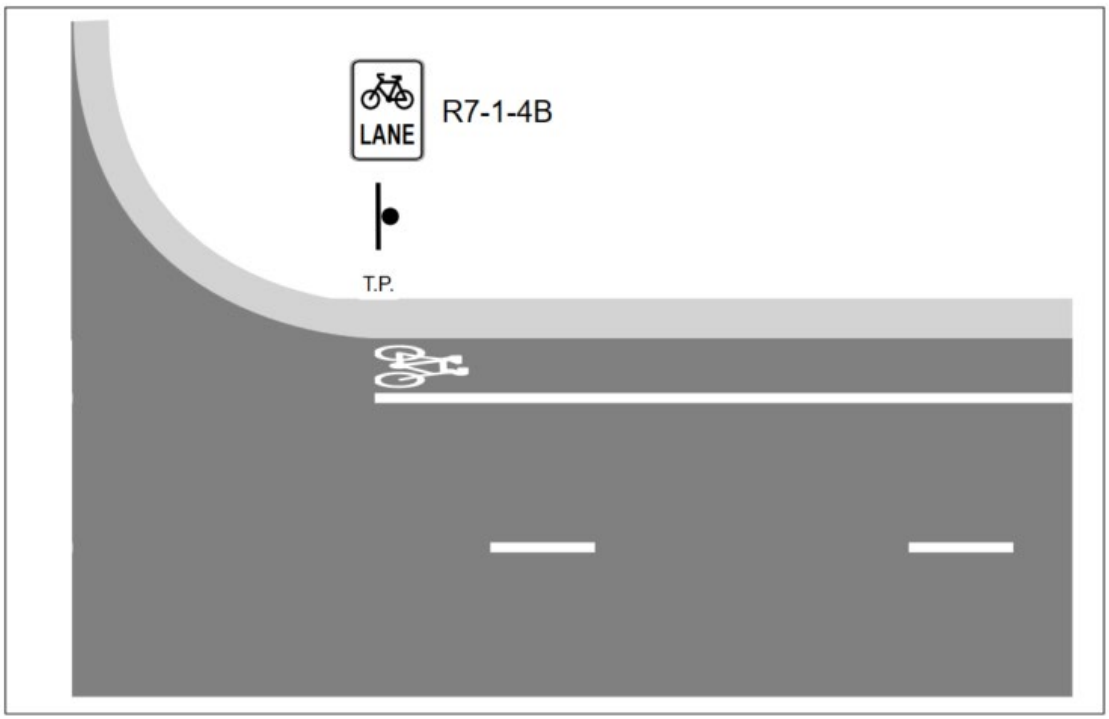


Figure A2 – Start of Bicycle Lane at Intersection

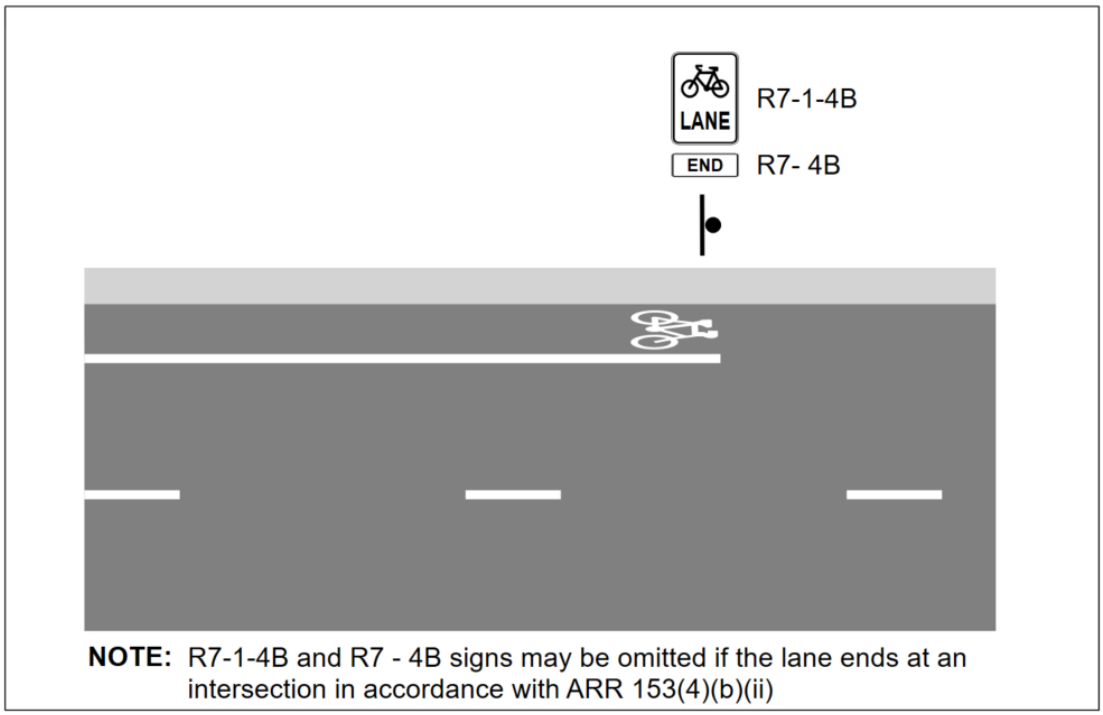
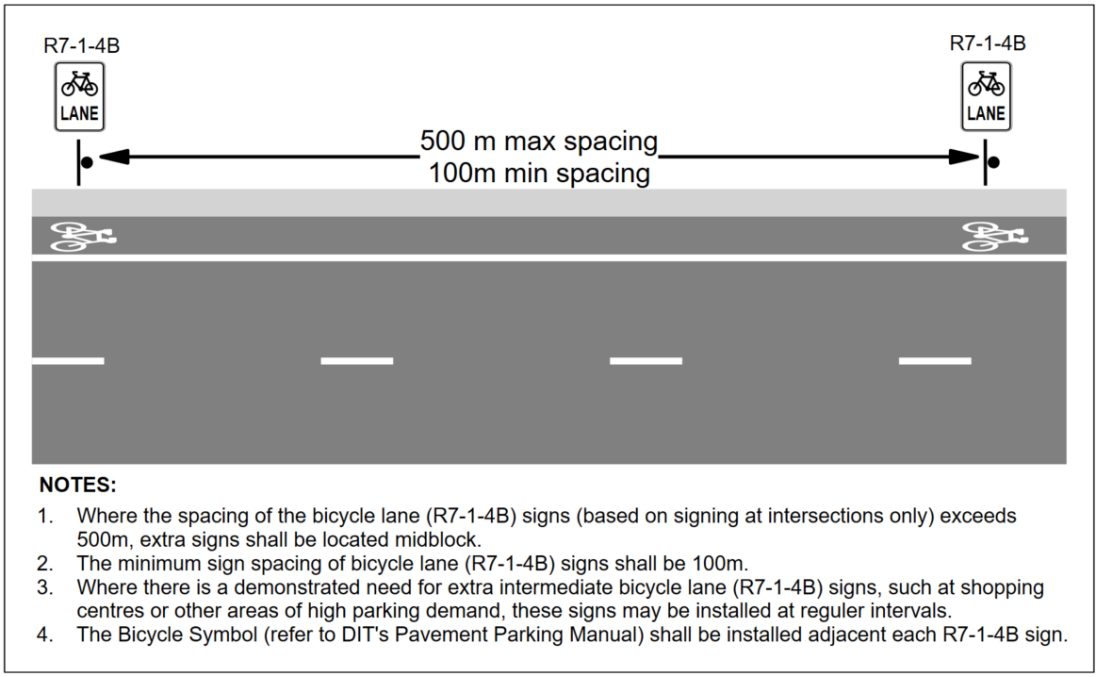


Figure A3 – End of Bicycle Lane



NOTES:

1. Where the spacing of the bicycle lane (R7-1-4B) signs (based on signing at intersections only) exceeds 500m, extra signs shall be located midblock.
2. The minimum sign spacing of bicycle lane (R7-1-4B) signs shall be 100m.
3. Where there is a demonstrated need for extra intermediate bicycle lane (R7-1-4B) signs, such at shopping centres or other areas of high parking demand, these signs may be installed at reguler intervals.
4. The Bicycle Symbol (refer to DIT's Pavement Parking Manual) shall be installed adjacent each R7-1-4B sign.

Figure A4 – Intermediate Bicycle Lane Signs

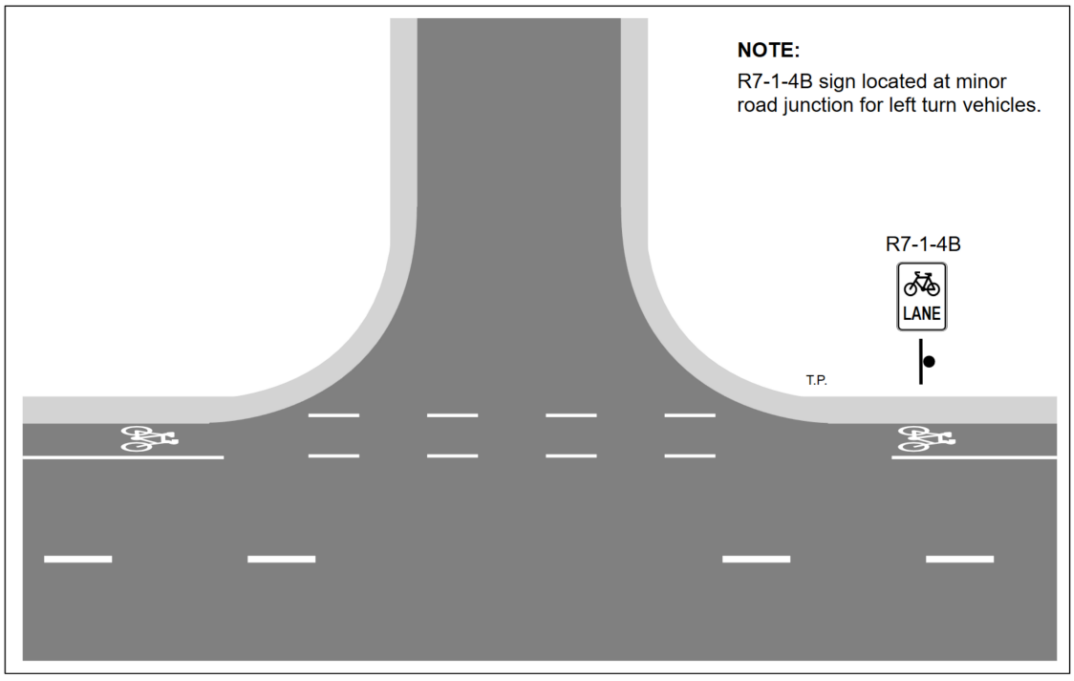


Figure A5 – Intermediate Bicycle Lane Sign (Minor Road Junction)

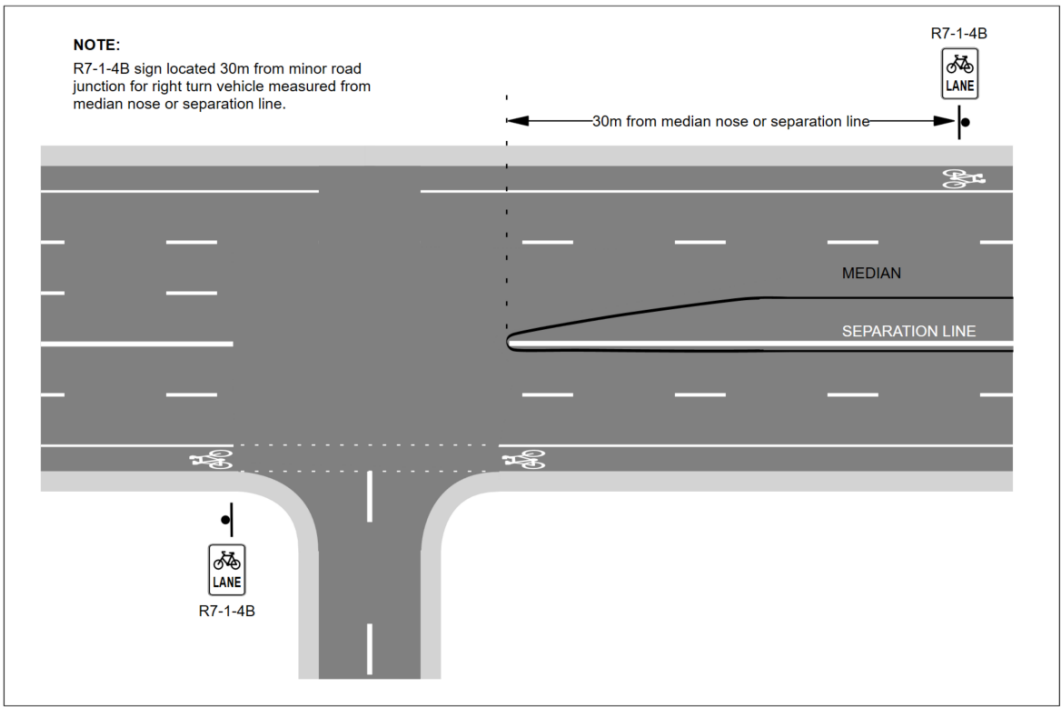


Figure A6 – Intermediate Bicycle Lane Signs (Right Turn from Minor Road)

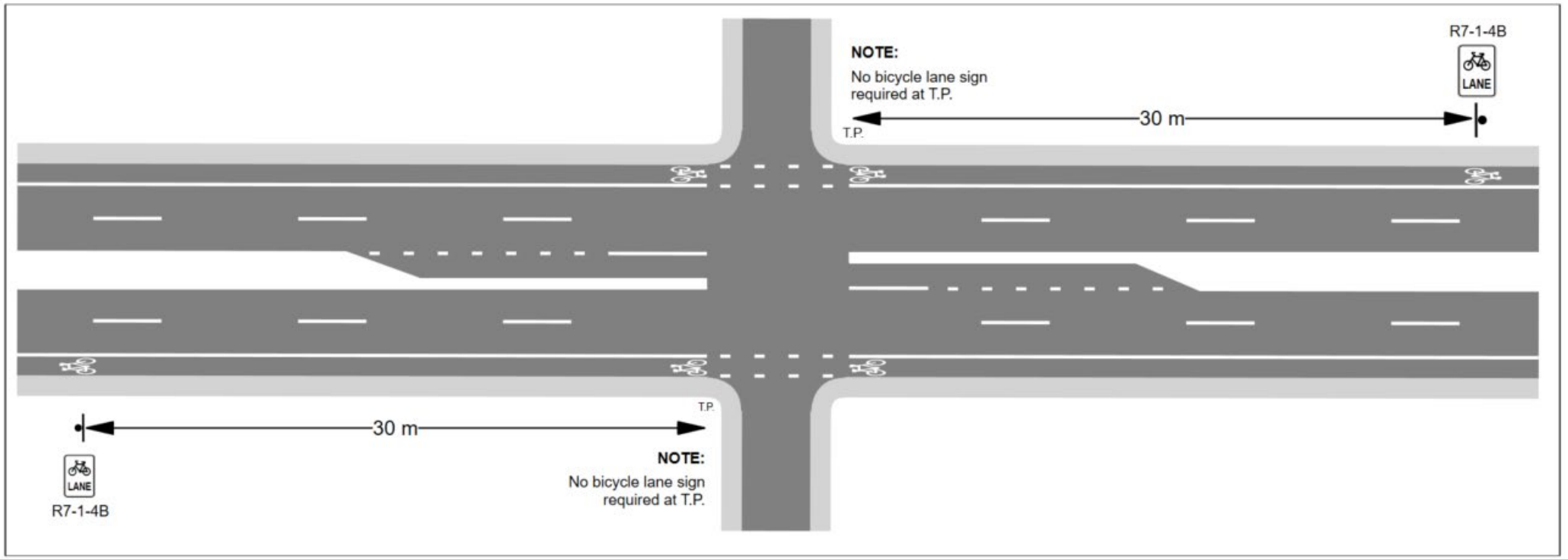


Figure A7 – Intermediate Bicycle Lane Signs (Unsignalised Intersection)

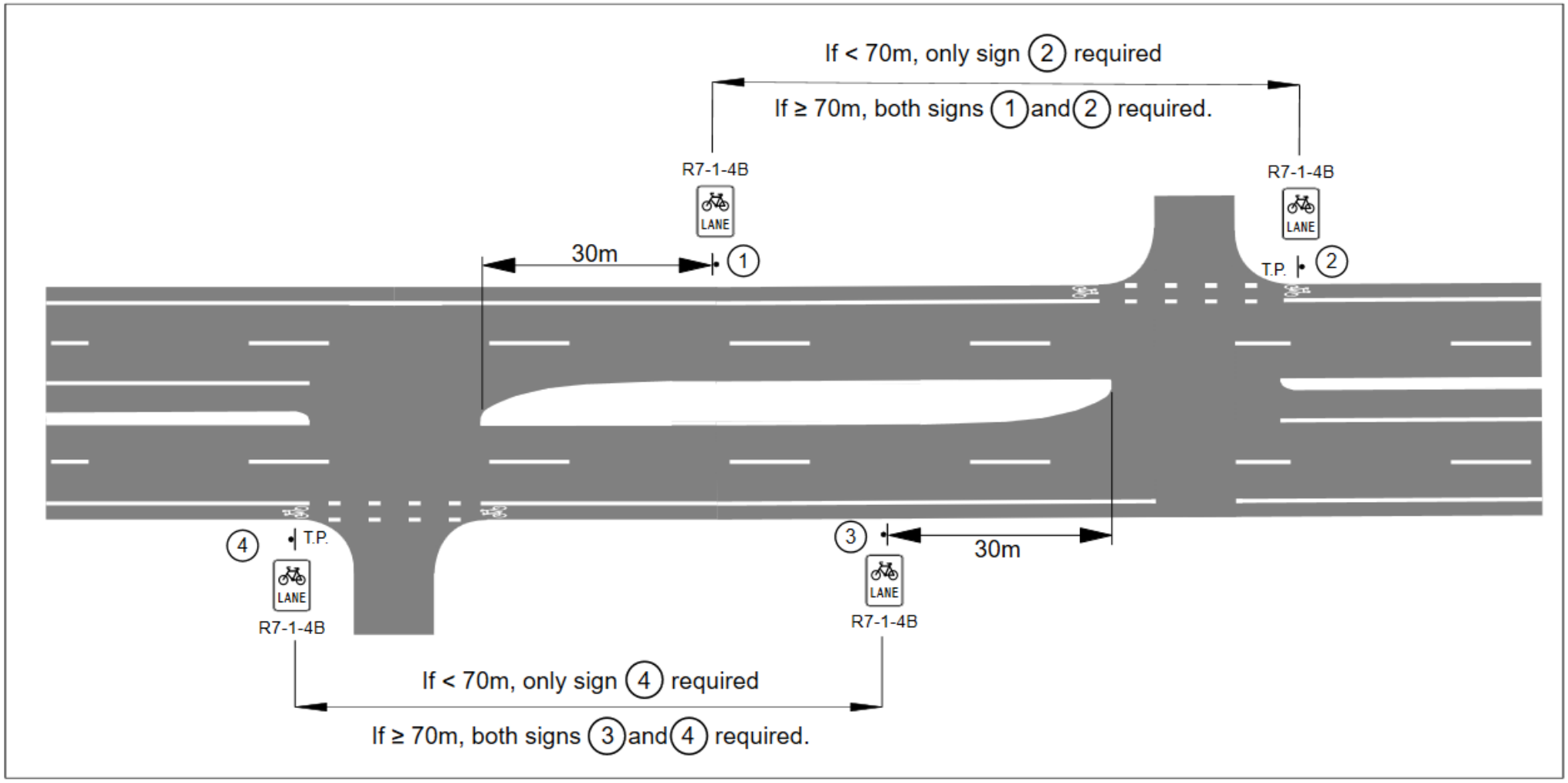


Figure A8 – Bicycle Lane Signs for Right-Left Staggered T-Intersections (Right-Left Staggered T-Intersections)

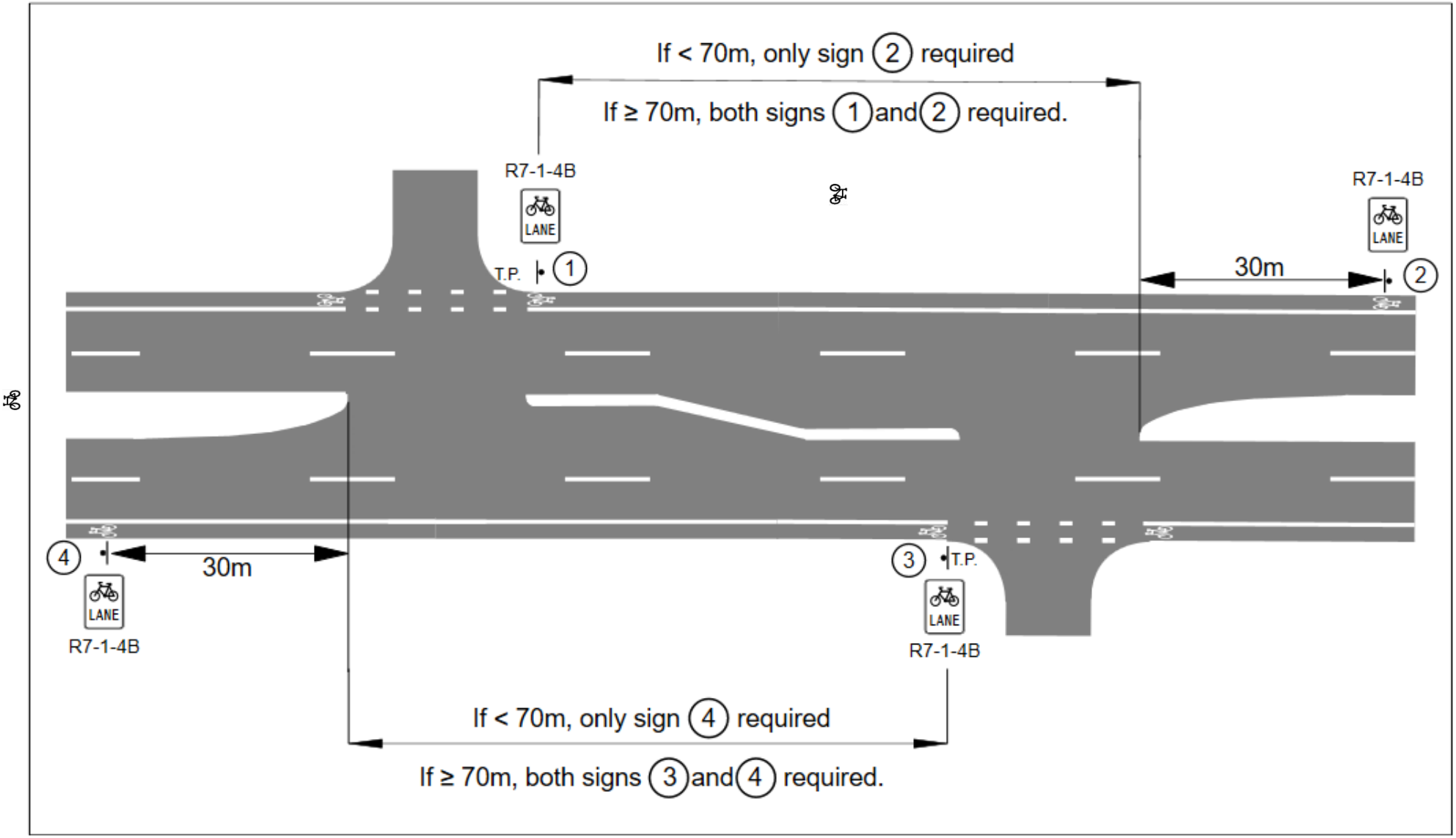
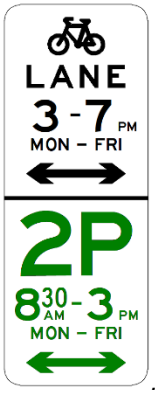


Figure A9 – Intermediate Bicycle Lane Signs (Left-Right Staggered T-Intersections)

Appendix B Various Bicycle Lane (Part Time) Parking Control sign combinations

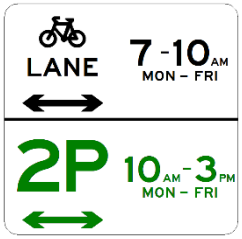
ADDITIONAL INFORMATION



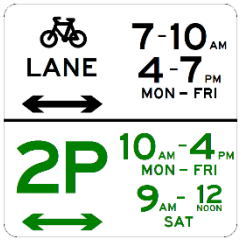
R5-SA101-1N*

**R5-SA101-2N signs displaying two time periods shall not be used due to their excessive height*

R5-SA101-N (Narrow) Bicycle Lane parking control signs

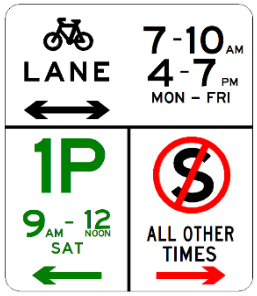


R5-SA101-1W



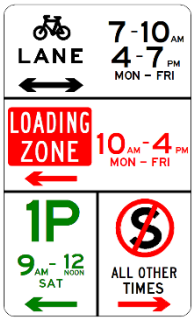
R5-SA101-2W

R5-SA101-W (Wide) Bicycle Lane parking control signs



Three Panels Combination

In accordance with AS1742.11 these signs will be used in the same manner as the clearway signs (R5-50) and to rationalise existing parking control signs at the site. These are the preferred signs to be used when other parking control signs are present.



Four Panels Combination

As for three panel combination, but more signs can be consolidated or included.

R5-SA101-W Multi-panel Bicycle Lane parking control signs

Appendix C Examples of median refuge treatments for bicycles

ADDITIONAL INFORMATION

See also the following examples of median refuge treatments where bicycle routes cross the arterial road network (uncontrolled crossings):

4 William St - Google Maps

2 Hillsdale St - Google Maps

24 William St - Google Maps

Joslin St - Google Maps

R1 - Google Maps

57 May Terrace - Google Maps

1 Hawkesbury Ave - Google Maps