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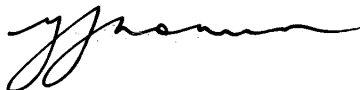
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P O L I C Y F O R C Y C L I N G I N F R A S T R U C T U R E

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AUTHORISATION

As Executive Director Planning and Practice of Main Roads Western Australia, I authorise the issue and use of this policy.



EXECUTIVE DIRECTOR PLANNING AND PRACTICE

Date : 14 / 11 / 2000

Refer to Main Roads Online documents for controlled copy.

REVISION STATUS RECORD

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1	POLICY STATEMENT	
	Main Roads Western Australia will use reasonable endeavour to:	
?	Provide and maintain facilities suitable for cycling on or alongside those highways and main roads for which it is responsible, in accordance with the guidelines attached to this policy, Standards Australia, Austroads Guide to Traffic Engineering Practice ¹ and State Transport Policy ² .	
?	Meet the requirements of all other anticipated users (including the disabled) in the provision of cycling facilities.	
?	Assist the Department of Transport (DOT) to promote cycling.	
?	Maintain an awareness of current cycling requirements through liaison with representative bicycle advocacy groups, in conjunction with established project consultation processes.	

Where information provided in this policy is in conflict with the guidelines in other publications, this policy and associated guidelines shall take precedence. Where the guidelines are unclear, clarification may be obtained from Main Roads *Manager Road Use*.

Where this policy and guidelines cannot be complied with, authorisation to proceed contrary to these guidelines shall be obtained from Main Roads *Manager Road Use*.

¹ Austroads Guide to Traffic Engineering Practice “Bicycles” Part 14, 1999.

² Including supporting documents such as the “Metropolitan Transport Strategy” and “Bike Ahead”.

2 GUIDELINES³

2.1 ON-ROAD CYCLING REQUIREMENTS

2.1.1 FREEWAYS AND URBAN CONTROLLED ACCESS HIGHWAYS

Under the Road Traffic Code⁴, a person shall not ride a bicycle on any part of a freeway and as such, no provision will be made for cycling on the carriageway of any freeway in Western Australia.

Main Roads will provide a shared path adjacent to one side and make allowance in land and structural designs for the future installation of a shared path along both sides of all freeways. Details are provided in Section 2.2.

2.1.2 OTHER SEALED HIGHWAYS AND MAIN ROADS

2.1.2.1 *Urban Areas*⁵

New roads will be constructed with an edgeline separated sealed shoulder (which may be kerbed), in accordance with the desirable standards within Austroads Guide to Traffic Engineering Practice “Bicycles” Part 14, 1999, Section 4.4.1. This sealed width may adjoin but not form part of roadside parking space and as such, allowance shall be included to accommodate opening car doors in accordance with Austroads Part 14, Section 4.4.2. Sealed shoulders intended for cyclists and bicycle lanes should be continuous through intersections. This is to avoid the common hazards (squeeze-points) created by bicycle lanes ending and forcing cyclists back into the motor-vehicle lane.

Where the above cannot be achieved a shared path will be constructed adjacent to the road. If this is not possible, an alternate route, with cycling facilities that meet the requirements of these guidelines for on-road cycling will be identified and signed on parallel roads (subject to agreement of the Local Authority).

On existing highways and main roads, the facility described above for new roads, will only be provided in conjunction with any upgrades involving widening of the road,

- (1) where land is available for the purpose within the existing road reserve ; or
- (2) if land is being resumed for other purposes and the cost of acquiring the additional land for the cycling facility is not proportionately higher than that for the other purpose.

³ This subscript has been deleted.

⁴ Western Australian Road Traffic Code 1975, State Publishing House, Perth, Western Australia.

⁵ Urban areas are defined as the Perth Metropolitan Region and townsites with a population exceeding 3000.

2.1.2.2 Rural Areas⁶

Sections of main roads and highways that are regularly used by more than 25 cyclists per day will comply with urban area guidelines indicated in section 2.1.2.1.

Sections of road that are not regularly used by cyclists will comply with Main Roads Technical Standards⁷ which requires:

- ~~///~~ An edgeline separated sealed shoulder 1.0 metre wide on roads with an Annual Average Daily Traffic (AADT) count exceeding 3000.
- ~~///~~ An edgeline separated sealed shoulder 0.5 metres wide on roads with an AADT between 1000 and 3000.
- ~~///~~ No sealed shoulders on roads with an AADT of less than 1000.

2.1.3 UNSEALED ROADS

No specific provision will be made for cyclists on unsealed roads under the responsibility of Main Roads.

2.1.4 TRAFFIC CONTROL DEVICES

2.1.4.1 Signs and Pavement Markings

Traffic control signs and lines will be in accordance with Austroads Part 14, Section 9 and AS1742.⁸ Navigation signs will be provided at locations where guidance on the continuity of the cycle route is considered necessary in accordance with Main Roads Bicycle Directional Signage guidelines and DOT⁹ requirements.

Main Roads will provide bicycle pavement symbols on edgeline separated sealed shoulders in built up areas suitable for cycling in accordance with Austroads Part 14 Section 9.6 except that symbol spacing, will be at 400m intervals.

"No Through Road" signs on roads which lead to bicycle facilities will include "except for bicycles" information to show that the road is still part of a continuous bicycle route.

2.1.4.2 Traffic Signals

Main Roads will continue to research detection systems at traffic signals that recognise cyclists across the full width of each intersection approach lane.

Where this cannot be achieved the approaches to traffic signals will be provided with diamond dot pavement markings to indicate the most bicycle-sensitive areas of the vehicle detection system within the pavement.

⁶ Rural areas are defined as all other locations outside urban areas within the State.

⁷ Main Roads Technical Standards "Geometric Road Design Standards and Practice Guidelines" Volume 1, Part 1, 1996.

⁸ AS1742, Manual of Uniform Traffic Control Devices, Part 9: Bicycle Facilities, 1986.

⁹ Perth Bicycle Network Coordinator, Department of Transport, 9320 9320.

Main Roads will provide a bicycle detection system in the cycle lane approaches to all new signalised intersections.

2.1.4.3 Roundabouts

The provision of cycling facilities at roundabouts will generally be in accordance with Austroads Part 14, Section 5.5.2. During design special consideration will be given to the sight distance requirements of cyclists and turning motorists.

2.2 OFF-ROAD CYCLING REQUIREMENTS

2.2.1 ADJOINING FREEWAY AND URBAN CONTROLLED ACCESS HIGHWAYS

A shared path¹⁰ to commuter path standards (as defined in Austroads Part 14 Section 6.6.1) with links to local roads and/or cycle routes will be installed as the principal shared path along the full length of any freeway or urban Controlled Access Highway (UCAH). When planning freeways and UCAH's provision will be made in land acquisition and the design of structures and the carriageways and for the later installation of a secondary shared path on the other side of the freeway or UCAH to enable cyclists to reach freeway or UCAH crossing facilities that will give them access to the principal shared path. This secondary path will only be provided for, where current or future adjoining land use indicates a requirement for the path and adjoining local government or other suitable cycling infrastructure that would serve this purpose, is not currently available or planned. Secondary paths shall be provided to the standard described for *Local Access Paths* in Austroads Part 14, section 6.6.1.

Where a freeway crosses over a river, a suitable shared path crossing will be provided in accordance with Austroads Part 14, Section 7.4.

¹⁰ Shared Path Definition

Regulation 242 (2) of the proposed Australian Road Rules states that "A shared path is an area open to the public (except a separated footpath) that is designated for, or has as one of its main uses, use by both riders of bicycles and pedestrians, and includes a length of path for use by both bicycles and pedestrians beginning at a *shared path sign* and ending at the nearest of the following:

- a) An *end shared path sign*.
- b) A *no bicycles sign* or no bicycles road marking.
- c) A *bicycle path sign*.
- d) A road (except a road related area).
- e) The end of the path ".

These are referred to as Shared Use Paths in Austroads Part 14.

Shared paths are also utilised by wheelchair users, skaters and those with disabilities.

¹¹ Shared Path Definition

Regulation 242 (2) of the proposed Australian Road Rules states that "A shared path is an area open to the public (except a separated footpath) that is designated for, or has as one of its main uses, use by both riders of bicycles and pedestrians, and includes a length of path for use by both bicycles and pedestrians beginning at a *shared path sign* and ending at the nearest of the following:

- f) An *end shared path sign*.

Grade separation of freeway interchanges will incorporate grade separated crossing facilities for pedestrians and cyclists. These will be installed in accordance with Austroads Part 14 section 7.4 and Austroads Part 13¹². On UCAH's where at grade crossings exist, shared use crossing facilities parallel to and as close as practical to the alignment of the UCAH shall be installed in accordance with Austroads Part 14 Section 6.7.

Shared use overpasses or underpasses across any freeway will be constructed at locations that facilitate and encourage local trips by cyclists, pedestrians and other users. These locations will be determined by considering current and future demand, sites of interest, connectivity, funding and access to transport routes.

2.2.2 ADJOINING OTHER SEALED HIGHWAYS AND MAIN ROADS

Main Roads will provide shared paths adjacent to highways and main roads which are not considered appropriate for cyclists or where the lane widths required by these guidelines can not be achieved.

2.2.3 SIGNS AND LINES

Pavement markings (including bicycle pavement symbols) line work and signs on shared paths will be in accordance with Austroads Part 14, Section 9 and AS1742.9.

Bicycle path and *end bicycle path* signs will be installed in accordance with RTC 2000.

Navigational signs will be provided in accordance with Main Roads Bicycle Directional Signage guidelines and DOT requirements.

2.2.4 LIGHTING

Main Roads will ensure lighting is available to ensure visibility, safety and security where they adjoin roads, which have street lighting.

This lighting will conform to Australian Standards AS 1158.1 and AS1158.B2 and Austroads Part 14, Section 6.8.

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- g) A *no bicycles sign* or no bicycles road marking.
 - h) A *bicycle path sign*.
 - i) A road (except a road related area).
 - j) The end of the path ”.

These are referred to as Shared Use Paths in Austroads Part 14.

Shared paths are also utilised by wheelchair users, skaters and those with disabilities.

¹² Austroads Guide to Traffic Engineering Practice “Pedestrians” Part 13, 1995.

¹³ AS 1428-1: Design for Access and Mobility, Part 1: General Requirements for Access, 1993.

2.2.5 FENCES, BOLLARDS AND GRAB RAILS

Devices such as fencing and bollards may be used to discourage use of motor vehicles on shared paths but shall be positioned to minimise disruption to cyclists. Bollards should be placed on local access paths and not on the through path. Warning of the location of bollards in paths shall be given in accordance with Austroads Part 14, Section 6.7.3. Raised pavement markers shall not be used. Removable bollards should be designed and installed to leave the path safe with nothing protruding above path level when the bollard is removed or lowered.

Grab rails will only be installed on shared paths near road crossings that are frequently used by aged or disabled pedestrians and alongside median openings. They will be fabricated and positioned in accordance with Main Roads Drawing 9831-5649, which can be viewed in the Technical Standards section of the MRWA website. Grab-rails should never be installed in the centre of footpaths or shared paths.

2.2.6 RAILWAY CROSSINGS

Bicycle crossings shall be constructed in accordance with Westrail requirements. Details may be obtained from the Project Director, Projects Directorate Group, Westrail.

2.2.7 PATH SURFACING AND WIDTH

Shared paths will have a red oxide coloured asphalt surface to a clear width of not less than the desirable minimum widths in Austroads Part 14, Table 6-3. Care will be taken to avoid placement of poles and posts within the path width. When planning and designing shared paths, consideration will be given to anticipated future demand and provision for widening the path beyond the Austroads

desirable minimum widths.

2.2.8 PATH SEPARATION

Consideration shall be given to separating shared paths on which there are a large number of cyclists, or where there is significant conflict between cyclists and pedestrians. This shall be done in accordance Austroads Part 14, Section 6.6.2.

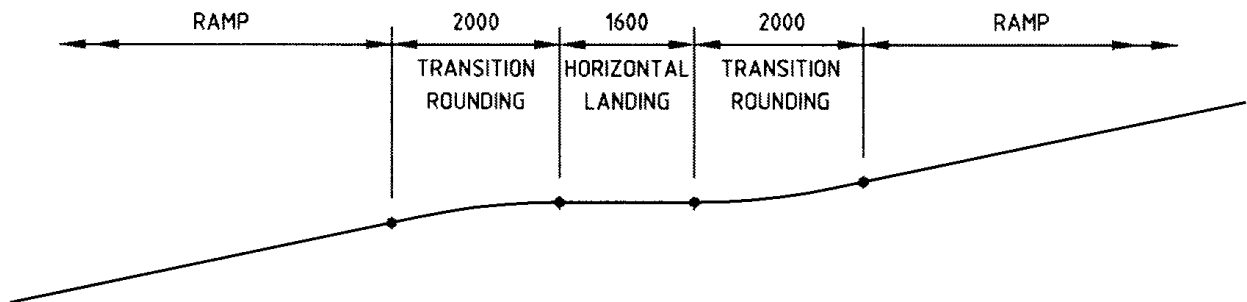
2.2.9 KERB AND DRIVEWAY RAMPS

Kerb ramps and ramps for driveways should be flush with the road pavement and not have a lip. The Main Roads standard kerb ramp design (Drawing 9831-5649) with no sharp drops or rises in the ramp should be used. A copy can be viewed in the Technical Standards section of the MRWA website. Similar standards shall be employed in the design of driveway crossovers.

2.2.10 Landings and Sloping Paths

¹⁴ Main Roads Road Lighting Policy and Guidelines, is yet to be finalised and endorsed.

Main Roads will provide horizontal landings on sloping shared paths to accommodate wheelchairs in accordance with the requirements of AS 1428-1 except that a horizontal landing length of 1.6 metres with two metre transition rounding on both sides will be provided as shown in Figure 1.



Dimensions in millimetres

Figure 1 – Preferred Shared Path Landing Dimensions

2.3 MAINTENANCE OF CYCLING FACILITIES

On and off-road cycling facilities that are the responsibility of Main Roads will be maintained in accordance with the current Term Network Contract. Typically these require:

- ? Debris and foreign materials (hazardous and unsightly) to be removed
- ? Damaged paths to be repaired
- ? Vegetation obstructing vision or affecting the pavement to be removed
- ? Repair of vandal damage to signs, structures or paths

2.4 ROADWORKS WHICH AFFECT CYCLING FACILITIES

Roadworks signs shall not be installed across shared paths, bicycle lanes or sealed shoulders which may be used by cyclists unless absolutely necessary and/or no other suitable location is available.

All warning signs placed on bicycle facilities shall be clearly visible under all conditions, including when path users are blinded by oncoming car lights. Adequate advance warning to oncoming cyclists shall be given when temporary signs block part or all of a path or other bicycle facility.

Traffic management plans for roadworks shall make and clearly show the provisions for cyclists and pedestrians.

¹⁵ Secretary, Transport Consumer Advisory Committee, 9320 9314.

Preference will be given to minimising the length of detours to cyclists and pedestrians.

3 IMPLEMENTATION OF THIS POLICY AND GUIDELINES

All new roadworks and upgrades involving road widening will meet the requirements of these guidelines.

Existing roads and cycling facilities that do not meet the above requirements will be progressively upgraded. The timing of retrofit work will be determined by the availability of funds and priorities. The *Guidelines for Assessing Cycling Level of Service*¹⁶ document can assist in identifying aspects of on or off-road cycling facilities that require upgrading.

Designation of priority for retrofit upgrading work will include, so far as reasonably practical, consideration of:

- ? Cyclist demand – actual or potential.
- ? The requirements of key cycling stakeholders through the Main Roads *Project Manager Pedestrian and Cyclists* or the *Cycling and Pedestrian Policy Officer*.
- ? Opportunities to minimise retrofit costs by combining improvement works with other works.

¹⁶ Main Roads, *Guidelines for Assessing Cycling Level of Service*, 2000.