Background Paper 3

Signs and Specifications

VICTORIA State Government | Department of Transport

Contents

Other elements of the project can be found at: https://www.vicroads.vic.gov.au/safety-and-road-rules/vehicle-safety/construction-trucks-and-community-safety

Any photos, figures or illustrations where a source is not provided should be assumed to be produced by the combined authors and organisations acknowledged below.

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1. Introduction

This paper forms one of a series of background papers relating to issues around the safety and provision for pedestrians and cyclists at roadworks. It provides additional details and information for use by practitioners. Through the background research undertaken as part of this work signing was identified as a key issue for pedestrians and cyclists. This covered two principle areas:

- Lack of warnings and direction for cyclists and pedestrians
- Poor placement of temporary signing causing obstruction and safety issues for pedestrians and cyclists

Often many roadworks fail to provide any signing or information for pedestrians and cyclists to either warn of temporary works, or guidance of how to navigate around or through the works. A Traffic Management Plan should ensure "…*road users in particular vulnerable road users (e.g. pedestrians, people with disabilities, cyclists and motorcyclists) are safely and efficiently guided around, through or past a road works site;"*

It is important to remember that road users are defined as "Any driver, rider, passenger or pedestrian using the road." (AS 1742.3:2019 p2 / AGTTM01-19, p12)

Temporary roadworks should therefore be providing signing for pedestrians and cyclists. This paper provides information on signs identified in the standards and guidance. It also suggests additional signing that would provide benefits to pedestrians and cyclists.

The research also identified a significant issue with sign placements. Many temporary signs are placed in locations that either obstruct, or close footpaths and cycle lanes creating both inconvenience and potential safety issues. The paper discusses some of these issues and considerations for sign placement.

This document was developed to support the "Safety Essentials: Accommodating Pedestrians and Bicycle Riders at Temporary Road Works" summary document. This project was undertaken for the Construction Truck and Vulnerable Road Safety project.

2. Signs

2.1 List of Signs: Australian Standards

There are number of signs relating to pedestrians and cyclists within the Australian standard. Provided immediately below are the signs most practitioners are familiar with which only cover pedestrians. The updated standard in 2019 introduced a wider selection of signs for pedestrians and cyclists.

Standard	Content
AS 1742.3 (2019) Section 4.17	**Signs available for pedestrian control around worksites** • T8-1A; 900mm x 600mm  • T8-2A (L or R); 1200mm x 300mm 

Standard	Content
	 • T8-3A; 900mm x 600mm  • T8-4; 900mm x 600mm  • T8-5; 900mm x 600mm 
AS 1742.3 (2019) AS 1742.3 (2019) Section 4.2.1	*Signs specified in this standard [AS1742.3] shall be used. However, there will be instances where there is no suitable standard sign. In such cases, the sign developed shall conform to the format requirements specified in Clause 4.4.* *NOTE: Advice on the determination of letter sizes for signs is given in AS 1742.2.*
AS 1742.3 (2019) Section 4.4.3	***Sign sizes in the T Series*** *The application of the sign size designations A and B in the T Series in this Section are as follows:* *(a) A size* *Applicable to all signs in T Series. This size will be suitable for—* *(i) traffic speeds up to 90 km/h where the lateral offset of the sign from the travel path is not more than 8.0 m; or* *(ii) at traffic speeds up to 110 km/h where the offset is not more than 4.5 m; or* *(iii) signs directed at pedestrians.* *(b) B size* *Applicable where an oversize sign may be required—* *(i) because the recommendations in Item (a) are exceeded; or* *(ii) on expressway type roads for added emphasis of the onset of works, detours or closures; or* *(iii) for other critical safety messages.* *NOTE: B size signs should also be considered for all T1 Series signs where the A size signboard is less than 1 m^2 in area and traffic speeds exceed 70 km/h.*

2.2 List of Signs: Australian Standards (New)

These are new signs provided in the latest Australian standards.

Sign	Code	Image
Look Both Ways	TM8-6A	
Watch Your Step	TM8-7A	
Symbolic Pedestrians	TM8-8A	
Footpath Closed Ahead	TM8-9A	
Narrow Footpath Ahead	TM8-10A	
Path Closed Ahead	TM8-11A	
Path Closed	TM8-12A	
Pedestrian Hazard	TM8-13A/B	

Sign	Code	Image
Cycling Hazard	TM8-14A/B	
Bicycle Lane Closed Ahead	TM8-15A	
Bicycle Lane Closed	TM8-16A	
Symbolic Bicycle Ahead	TM8-17A	
Symbolic Bicycle	TM8-18A	
Accessible Path and Pedestrian Path	TM8-19C	
Accessible Path	TM8-20B	
Cyclists Dismount	GM9-58A	
Example MMS Signs		

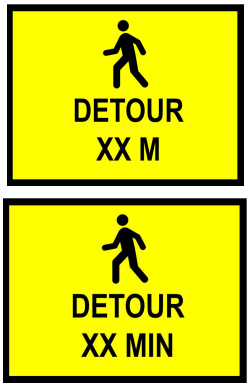
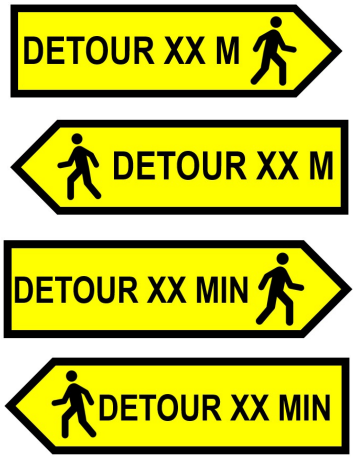
2.3 Custom Signs

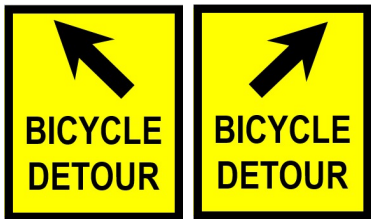
In order to improve conditions for pedestrians and cyclists around construction sites, and inform them of works ahead, diversion routes, and any altered pedestrian infrastructure, use of additional signage should be considered.

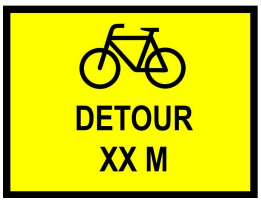
The table below provides recommended signage for pedestrians and cyclists around construction sites, with suggested use and placement. These signs don't need to be used around one worksite, instead the list provides TMP practitioners with multiple options for scenarios around sites, so that they can draw upon those most suited to the situation at hand. Sizing of the signs is to be adopted appropriate to the environment.

The signage developed for cyclists is also deemed suitable to Shared Use Paths (SUP), whereby the symbol of a pedestrian should be included adjacent to the bike symbol to indicate a SUP correctly.

Suggested sign	Suggested use	Suggested placement
	Where pedestrian paths around construction sites have: • Uneven surfaces • Differences in levels • Loose surface material	• In front of the footpath section affected by poor ground conditions.
	• Ahead of footpaths that have been closed due to construction activities; to inform path users of the closure in advance. • To prevent path users travelling to the closed footpath, requiring them to return to a location where it is safe to cross to another footpath.	• Ahead of the footpath closure, where pedestrians can cross safely to access another footpath
	• To warn pedestrians of a designated detour and provide them with an option of re-routing prior to arriving at the detour.	• Ahead of the start of a detour • Where alternative routes around the site can be taken
	• To inform pedestrians where a detour ends, prompting them that the route from then onwards is as per permanent conditions	• At the end of a detour
	• To inform pedestrians (and other road users) of the designated pedestrian detour direction	• At the start or along a pedestrian detour around a construction site • Where multiple route options are available • Where different modes are to follow different detours

Suggested sign	Suggested use	Suggested placement
	• To prompt pedestrians of their designated detour path around construction sites	• At the start of a detour • Where multiple route options are available • Where different modes are to follow different detours • At all decision-making points
	• To inform pedestrians on the length (distance or time) of the provided detour around construction sites • Distance can be in metres (M) or minutes (Min) so pedestrians know how far the new route is • To help pedestrians make an informed decision as to whether they would prefer to take another route	• At the start of a detour
	• Where detours are long, the sign can be used to inform pedestrians of the length / duration of the detour ahead • Where different detour options are available, the signs can be used to inform on the distance or time of each detour route	• At sections along the detour e.g. midpoint • Where a path divides into multiple detour routes
 Note: Could also use: USE OF ALTERNATE ROUTE	• Where the existing route is affected by the works, and an alternative route is provided and advised • To be used in conjunction with detour signs where required and path closure signs where applicable	• Where the existing route is not to be used, and pedestrians are encouraged to use the alternative routes
	• Sign (W6-7 and W8-23) is taken from the permanent signage (AS 1742.9 (2000) and is to be located where any path is about to cross a path used by bicycles, and poor sight distance, high bicycle speeds or other factors necessitate a warning for people about to cross the path.	• In front of the location where the cycle path crosses the pedestrian path (unexpectedly)

Suggested sign	Suggested use	Suggested placement
	• Around construction sites this sign is recommended, where pedestrians cross a temporary cycle path, that under normal circumstances would not • Similar sign available for shared user paths (W6-9 and W6-23) should be used where appropriate	
	• In an area where another mode of transport has been prohibited, but pedestrians are accepted	• In the same location as a sign indicating that other modes of transport are prohibited
	• Ahead of a footpath that is narrowed as a result of construction works, to warn pedestrians, especially those with disabilities of the constraints ahead • Provide people advance warning of the change in footpath width, to give them the opportunity to change route if required	• Ahead of the location where the footpath narrows, preferably where there is an opportunity for users to choose an alternative path or crossing facility, if individuals wish to avoid the affected footpath section
	Where bike lanes around construction sites have: • uneven surfaces • differences in levels • loose surface material	• In front of the bike lane affected by poor ground conditions.
	• To warn cyclists of a designated detour and provide them with an option of re-routing prior to arriving at the detour.	• Ahead of the start of a detour • Where alternative routes around the site can be taken
	• To inform cyclists where a detour ends, prompting them that the route from then onwards is as per permanent conditions	• At the end of a detour
	• To inform cyclists (and other road users) of the designated bike detour direction • To inform cyclists (and other road users) of their designated path around construction sites, where it deviates from the vehicle route	• At the start or along a bike detour around a construction site • Where the cycle route deviates from the vehicle route • Where different modes are to follow different detours • Where multiple route options are present
	• To prompt cyclists of their designated path around construction sites	• At the start of a detour • Where multiple route options are available

Suggested sign	Suggested use	Suggested placement
	• To inform cyclists of their route where it deviates from the vehicle route	• Where different modes are to follow different detours • At all decision-making points
 	• To inform cyclists on the length (distance or time) of the provided detour around construction sites • To help cyclists make a decision as to whether they would prefer to take another route	• At the start of a detour
   	• Where detours are long, the sign can be used to inform cyclists of the length / duration of the detour ahead • Where different detour options are available, the signs can be used to inform on the distance or time of each detour route	• At sections along the detour e.g. midpoint • Where a path divides into multiple detour routes
 Note: Could also use: USE OF ALTERNATE ROUTE	• Where the existing route is affected by the works, and an alternative route is provided and advised • To be used in conjunction with detour signs where required and path closure signs where applicable	• Where the existing route is not to be used, and cyclists are encouraged to use the alternative routes
	• Sign (W6-1 and W8-23) is taken from the permanent signage (AS 1742. 9 (2000) and is to be located where any path is about to cross a path used by pedestrians, and poor sight distance, high bicycle speeds or other factors necessitate a warning for people about to cross the path. • Around construction sites this sign is recommended, where cyclists cross a temporary pedestrian path, that under	• In front of the location where a pedestrian path crosses the bike path (unexpectedly)

Suggested sign	Suggested use	Suggested placement
	normal circumstances would not. • Similar sign available for shared use paths (W6-9 and W6-23) should be used where appropriate	
	• In an area where another mode of transport has been prohibited, but cyclists are accepted. Could instead read 'Bicycle Access Only'	• In the same location as a sign indicating that other modes of transport are prohibited
	• Where temporary construction site conditions require cyclists to ride with caution. This may be due to poor path quality, confined spaces, high pedestrian volumes, truck activity or other	• At the start of an area that is seen to be hazardous, if caution is not practiced by cyclists
	• Where temporary construction site conditions require other modes to give way to cyclists to ensure their safety and continuity of travel around sites. • Can be used where cycle lanes end or are closed to assist merging between cyclists and vehicles.	• Facing modes that are to give way to cyclists.

2.3.1 Approval Process of Custom Signs

The use of additional non-standard signage around construction sites, will require appropriate consultation with State road authorities.

In Victoria, VicRoads' Traffic Engineering Manual (TEM) Supplement to AS 1742.1 (2014) General Introduction and Index of Signs specifies that non-standard signs fall into the following two categories, which require approval prior to implementation:

Victoria special signs

"These signs are only considered if Australian Standards signs do not exist or do not adequately cover a particular situation (..) Such signs require approval of the Manager - Network Standards, who will make arrangements for the required contact with Standards Australia."

Site specific signs

"[These] are non-standard signs used for specific site conditions. Such signs have a very low likelihood of being used at other locations on the Victorian road network. Use of such signs on VicRoads managed roads requires the approval of the relevant VicRoads Regional Director."

In line with any use of traffic control devices that are not used in Victorian worksite traffic management practices, these formal approval processes are mandatory prior to implementation.

3. Current Pedestrian Sign Use and Implementation

3.1 Signs: Things to Avoid

3.1.1 Lack of Provision of Advance Warning Signage

Amongst the signage intended for pedestrians around construction works, AS 1742.3 (2019) provides five core signs that are available to direct and divert pedestrians around the site.

While there are no requirements specified for the use and placement of these signs it is important that the items under the following subheadings are considered / avoided:

Placement of T8-3 “USE OTHER FOOTPATH” sign should be located where it is possible for pedestrians to safely cross to the other footpath. Pedestrians should be able to access the alternative easily. If the sign is located away from the last possible point of crossing, then there is a risk that pedestrians will cross unsafely where there is no adequate crossing provision. Directing pedestrians into parked vehicles or across uneven surfaces should be avoided.

3.1.2 Use of Sign: “Pedestrians Watch Your Step”

The T8-1 "PEDESTRIANS WATCH YOUR STEP” sign, as exemplified under Figure 1 from AS 1742.3 Manual of uniform traffic control devices – Traffic control devices for works on roads (2019) is specified to be applied under the following circumstances:

where the route for pedestrians across incomplete works could be hazardous because of roughness, level differences, or loose or other surface material

Whilst the circumstances listed may call for the use of the sign, it should not be used to compensate for poor ground quality around sites. In the first instance, pedestrian pathways around construction sites should always be provided to the highest standard possible so far as reasonably practicable.

It is noted that the use of T8-1 sign does not place the responsibility of potential accidents that occur due to poor ground conditions on the pedestrian, as may be interpreted by the wording of the sign. A sign annotating “ROUGH SURFACE”, is deemed more appropriate where ground surfaces are poor around sites.

FIGURE 1: PEDESTRIANS WATCH YOUR STEP – SHOULD NOT BE USED AS GENERAL CATCH ALL FOR POORLY LAID OUT CONTROLS

Multiple sign displays are commonly used around construction sites. Those located at ground level can take up a considerable amount of the footpath and are prone to pedestrians tripping over them. Where possible these should be avoided, and signs should be mounted instead to keep the footpath clear for pedestrians.

3.1.3 Use of Multiple Sign Displays

FIGURE 2: MULTIPLE SIGN DISPLAY TAKING UP FOOTPATH SPACE

FIGURE 3: POST MOUNTED PEDESTRIAN SIGN KEEPS FOOTPATH CLEAR

Mounting signs or placing in medians or other protected areas should be considered in CBD and high pedestrian flow environments. Where works are mid to long term, signs should be mounted and not be on any form of moveable display.

4. Current Cyclist Sign Use and Implementation

The same principles recommended in developing pedestrian signage around construction sites should be applied to cyclists (and for shared use paths), as follows:

- Provision of sufficient advance warning of changes to permanent cycle infrastructure, so that the user can make an informed and safe decision on their route of choice ahead. Placement of signage should take into account possible speeds of cyclists in the area as well as sight distance
- Provision of path guidance through or around works sites
- Provision of advance warning of any hazards to cyclists
- Strategic sign placement to reduce ‘sign clutter’, minimising confusion and misinterpretation of instructions around sites

4.1 Cyclists: Things to Avoid

4.1.1 Use of "Cyclists Dismount" Sign

FIGURE 3: SIGN G9-58 CYCLISTS DISMOUNT

Around construction sites, where the road infrastructure is often temporarily altered, sign G9-58 "CYCLIST DISMOUNT" is frequently drawn upon, although it is not specifically designated for temporary use. AS 1742.9 (2018) specifies that the sign may be 'used to warn cyclists to dismount before reaching a particular place at or beyond which it would be hazardous to continue riding".

Observations show general use of this sign where practitioners are unable, or not prepared, to consider alternative provision for cyclists.

Instead of encouraging cyclists to dismount where it is felt hazardous to ride, circumstances should be amended to provide a safe environment for cyclists. The use of sign G9-58 places the responsibility of potential accidents that could occur because of poor conditions on the cyclist, instead of ensuring a risk-free cycling environment is created. If the sign is used, it should be done so as a last resort.

As many cycling commuters wear special "cleats" on their cycle shoes they will not walk for any distance because it is both uncomfortable and damages their shoes.

4.1.2 Cycle lane closure

Attempts should be made to keep cycle lanes open during works. If space does not allow a lane to be maintained where a lane is closed it is important to ensure other vehicles are aware of cyclists merging into the traffic flow. The speed differentiation may create a safety issue for cyclists. AGTTM Part 3 - 3.10,4.10,5.13 states:

- *additional signage should be placed to alert road users of merging cyclists. This signage shall be placed at the relevant stopping distance in advance of the closed section of the bicycle lane.*
- *consideration of differing speeds and behaviours between cyclists and other road users. Cyclists tend to move slower and in a different manner to other road users.*
- *separating cyclists from other road users by time, if the existing traffic lane is narrow or rough, by allowing other road users to manoeuvre past the worksite first and cyclists second. Traffic controllers shall be provided to ensure that no other road users follow behind cyclists until they have cleared the area. Multiple traffic controllers will be required, one for traffic and one for cyclists.*
- *a temporary speed limit for road users applied to provide safe entry of cyclists into traffic lanes.*

Just closing a lane without warning, or obstructing it with other signs creates a safety issue.

4.1.3 Use of Pavement Marking

Permanent road pavement markings for cyclists are covered in Section 2.3 of AS 1742.9 (2018) Bicycle facilities. It is recommended that where pavement markings are used to temporarily direct cyclists around construction sites, the same level of standards in terms of dimensions and locality are applied to the temporary road markers. Specifications for these are set out in the following.

Bicycle Lane Line

- Placed between the bicycle lane and lanes of moving traffic, and where appropriate, a parking lane
- White, unbroken, 100 mm wide

Continuity Line

- Placed where motor traffic must enter or cross an exclusive bicycle lane when making a turn at an intersection or major driveway; and to show the continuity of a bicycle lane where it continues through an un-signalised intersection
- White, broken (1 m line, 3 m gaps), 100 mm wide

Stop Line

- Placed in an exclusive bicycle lane at the point where bicycles must stop at traffic signals
- Can be placed up to 2 m ahead of vehicle stop line, provided it is clear of cross traffic and pedestrian crossing
- White, same width as stop line provided for other traffic

Chevrons

- Placed between parallel parking and bicycle lane to protecting a cyclist from dooring

Bicycle Symbol

- Where used on roads, the bicycle symbol should be as shown, with a smaller symbol for bicycle paths.

For exclusive bike lanes:

- The symbol shall be used at the beginning of the lane and at additional locations along the lane (spacing ≤ 200 m)
- It may be placed on the approach and departure sides of intersections
- It may be located at the end of the lane in combination with the word END.

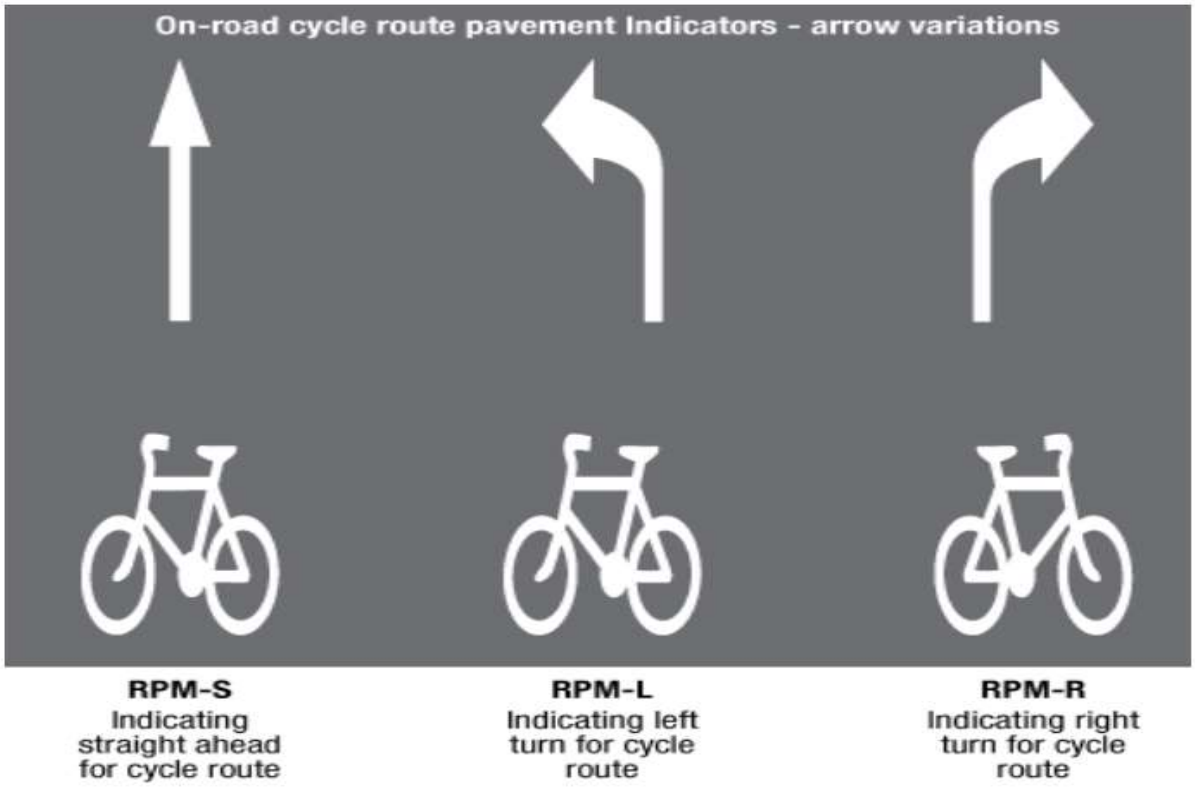


FIGURE 4: ON-ROAD CYCLE ROUTE PAVEMENT INDICATORS[1]

[1] Australian Standards 1742.9:2000

Austroads Research Report on Bicycle Wayfinding (2015) further identifies that route directional pavement markings can be used to warn cyclists of on to off road transitions which could be difficult to identify from a distance or at speeds. The report notes that directional pavement markings are a useful navigation aid and provide an important supporting role to signs and can be used on all types of routes. Figure 4 are taken from the report and identify the layout and positioning for on-road cycle route pavement indicators.

For long-term works, pavement marking, symbols and arrows should consist of non-slip and long-life marking material. For short-term works, it is suggested that alternative markings are used, that can easily be removed upon completion of the works.

Figure 5 provides an example of substandard pavement marking treatment provided for cyclists around a construction site. Inconsistency in line width and type, small symbol annotation and provision of unclear markings are some of the aspects that are poorly executed in the example.

Where cycle paths are temporarily diverted onto footpaths and a temporary shared path created, consideration should be given to the use of pavement markings to slow cyclists down to a suitable speed and of its interaction with pedestrians, as per Figure 6.

FIGURE 5: INADEQUATE USE OF PAVEMENT MARKINGS

FIGURE 6: APPROPRIATE USE OF PAVEMENT MARKINGS

5. Traffic Signage

This section looks at traffic signage around construction zones to ensure pedestrian and cyclists are suitably considered. The section also covers traffic signage sizing and placement and its effect on facilities for these road users. It further addresses signage warning traffic of the presence of pedestrian and cyclists around construction sites.

Standard	Content
AS 1742.3 (2019) Section 4.3.2	*Signs and devices shall be positioned and erected so that—* *(e) they do not become a possible hazard to workers, pedestrians or vehicles;* *On kerbed roads in built-up areas where signs are mounted on posts adjacent to a footpath or where vehicle parking may occur, they should be placed a minimum of 300 mm clear distance behind the kerb and erected a minimum of 2.2 m above the level of the kerb or footpath to the underside of the sign, to reduce interference from parked vehicles.* *Signs mounted on portable supports used for short-term operation (see Clause 3.3) should generally be located as follows:* *(i) In open road areas* *On the road shoulder a minimum of 1 m clear of the travelled way.* *(ii) In built-up areas*

Standard	Content
	Behind the kerb if visible to oncoming traffic and not obstructing pedestrians, otherwise on the pavement as near as practicable to the kerb without the sign becoming obscured and without obstructing moving traffic.
AS 1742.3 (2019) Section 4.4.3	*The application of the sign size designations A and B in the T Series in this Section are as follows:* *(a) A size* *Applicable to all signs in T Series. This size will be suitable for—* *(i) traffic speeds up to 90 km/h where the lateral offset of the sign from the travel path is not more than 8.0 m; or* *(ii) at traffic speeds up to 110 km/h where the offset is not more than 4.5 m; or* *(iii) signs directed at pedestrians.* *(b) B size* *Applicable where an oversize sign may be required—* *(i) because the recommendations in Item (a) are exceeded; or* *(ii) on expressway type roads for added emphasis of the onset of works, detours or closures; or* *(iii) for other critical safety messages.* *NOTE: B size signs should also be considered for all T1 Series signs where the A size signboard is less than 1 m^2 in area and traffic speeds exceed 70 km/h.*
AS 1742.3 (2019) **Section 4.5.1**	*Mountings for short-term operations should be arranged so that the signs are prominently displayed to traffic and will command attention. The minimum mounting height of the lower edge of the sign should be 200 mm.*

The following principles should be applied for the use of traffic signage during construction

- Signage should not impact negatively on pedestrians and cyclists (e.g. should not obstruct their path)
- Should communicate to drivers the need to acknowledge pedestrians and cyclists, and their safety

5.1 Avoid Obstructing Bike Paths and Pedestrian Paths

As specified under AS 1742.3 Manual of uniform traffic control devices – Traffic control devices for works on roads (2019) Section 4.3.2, construction signage for traffic should not impede pedestrians and cyclists. Under ‘best practice’ there are recommendations made as to how obstruction can be avoided or kept to a minimum.

Figure 7 and Figure 8 illustrate typical bad practice in the placement of VMS and other signs which frequently obstruct both pedestrian and cycle paths/lanes. VMS’ are often 1.2 m wide which can be a problem in urban areas with footpaths widths of 1.5 m to 2 m. Placement needs to ensure adequate width for pedestrians to pass.

FIGURE 7: EXAMPLE OF VMS OBSTRUCTING THE FOOTPATH

FIGURE 8: EXAMPLE OF TEMPORARY SIGNAGE OBSTRUCTING THE FOOTPATH

5.2 Mounting of Signs

Where possible, signs should be mounted to avoid obstructing pedestrian or cycle paths, especially for semi-permanent or long-term works. Mounting on permanent signage and street furniture is possible if they do not obstruct their use.

5.3 Sizing of Construction Signage Based on Road Speed

It is recommended that the dimensions of temporary traffic signs be minimised where located on cycle/pedestrian paths, depending on the enforced vehicle speed in the area.

Dimensions for the many signs used around construction sites can be found in the following tables in AS 1742.3 Manual of uniform traffic control devices – Traffic control devices for works on roads (2019):

- Table 4.1(A-I) Signs for works site approaches and departures
- Table 4.2 Signs for regulator control of traffic
- Table 4.3 Signs for detours
- Table 4.4 Road condition signs
- Table 4.5 Signs for lane and road closures
- Table 4.9 Signs for pilot vehicle
- Table 4.11 Signs for managing pedestrians

AS1742 advises that up to 90 km/h, temporary signs should be of size A if implemented within the required offset from the travel path. At higher speeds or lower offsets, size B should be adopted.

It is recommended that T signs be further reduced in size in areas where the speed is 40 km/h or less, as drivers can read signs more readily at these speeds.

The suggested width reductions for T signs are as follows:

- Where signs have width dimensions of 600 mm under their A category, it is suggested that these can be reduced to 450 mm
- Where signs have width dimensions of 1200 mm under their A category, it is suggested that these can be reduced to 900 mm

The Y- axis adopted is to be in proportion to the X axis.

Prior to adopting reduced signage, State authorities need to be consulted and associated approvals sought.

5.4 Pedestrian and Cyclists Warning Signs

FIGURE 9: PEDESTRIAN AND CYCLIST WARNING SIGNAGE

Diversion routes for pedestrians and cyclists may require them to enter the roadway to make their way around the works. It is therefore recommended that signs warning motorists of their presence are put in place on approach to the works. Signs W6-7 and W6-1, usually used under permanent conditions are recommended for use and are shown in Figure 9.

6. Conclusion

This paper has provided collated information relating to provision of signs and directions to improve safety and minimise the disruption and impacts of temporary road works on pedestrians and cyclists. It reinforces the need to consider those modes as road users and ensure a multi-modal approach to temporary traffic management as required by the standards and guidance.

It has also highlighted the need for greater consideration of sign placement and the potential issues caused by this to pedestrians and cyclists. Much of this is simple common sense and requires designers and traffic controllers to think about the impact of their placement of signs.

7. References

Australian Standards 1742.3 (2019) Traffic Control for Works on Roads

Austroads Guide to Temporary Traffic Management Part 1 Introduction

VicRoads' Traffic Engineering Manual (TEM) Supplement to AS 1742.1 (2014)

Australian Standards 1742.9 (2018) Manual of uniform traffic control devices, Part 9: Bicycle facilities

Austroads Guide to Temporary Traffic Management Part 3 Static Worksites

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