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# **Traffic Management for Works on Roads Code of Practice – Updates**

March 2024

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# Contents

<b>1</b>	<b>PURPOSE</b> .....	<b>3</b>
<b>2</b>	<b>CHANGES</b> .....	<b>3</b>
2.1	Section 2.1.1 - Main Roads Policy for Works on High Volume Roads .....	3
2.2	Section 2.1.2 – Traffic Management Company Registration.....	3
2.3	Section 2.4 – Traffic Modelling .....	3
2.4	Section 4.2.3 - Traffic Management Involving ‘Complex Traffic Arrangements’ .....	3
2.4.1	Lane Closures on High-Speed High-Volume Roads .....	3
2.4.2	Any plan at permanent traffic signals that requires .....	3
2.4.3	40 km/h Temporary Speed Limit on High-Speed High-Volume Roads.....	4
2.4.4	AWTM / WTM On-site .....	4
2.5	Section 4.5 - Variation to Code .....	4
2.6	Section 6.1.9 - Sign Spacing.....	5
2.7	Section 6.3.1 Securing Signs .....	6
2.8	Section 6.5.2 - Setting out Temporary Speed Zones (Buffer Zones) .....	6
2.9	Section 6.8 – Traffic Control.....	7
2.9.1	6.8.1 – Advance Warning Signs.....	7
2.9.2	6.8.2 – Avoiding End of Queue Collisions .....	7
2.9.3	6.8.3 - Portable Traffic Control Devices .....	7
2.9.4	6.8.6 – Shuttle flow .....	8
2.9.5	New section – 6.8.8 Traffic Control Near Intersections .....	8
2.10	Section 6.9 - Truck Mounted Attenuators .....	8
2.11	Section 6.11 - Traffic Volume.....	9
2.12	Section 6.15 - Traffic Cones and Bollards .....	10
2.13	Section 6.16- Speed Feedback Signs .....	10
2.14	Section 8 – Accreditation Requirements .....	11
2.14.1	Traffic Controller and Basic Worksite Traffic Management accreditation .....	11
2.14.2	Operate Truck Mounted Attenuator .....	13

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# 1 PURPOSE

This document outlines the updates to the March 2024 edition of the [Traffic Management for Works on Roads Code of Practice](#) (the Code).

## 2 CHANGES

### 2.1 Section 2.1.1 - Main Roads Policy for Works on High Volume Roads

The Traffic Management at Roadworks on State Roads Policy and Application Guidelines has now been removed and all requirements incorporated within the Code:

- Speed limits (to be included in section 6.5.3),
- Lane closures (to be included in section 6.11),
- Merges (new section - 6.17),
- Emergency lanes (new section - 6.18),
- Smart Freeways (new section - 6.19), and
- Worksite access (new section - 6.20).

All the requirements of the policy will remain the same with the exception of the following changes:

- Requirement for RTM endorsement for TMPs including a 40 km/h temporary speed limit on high speed high volume roads, expanded outside the metro area (see item 2.2.2 for section 4.2.3)
- Changes to traffic volume allowance (see item 2.11 below for section 6.11)
- Removal of the congestion calculator

### 2.2 Section 2.1.2 – Traffic Management Company Registration

Section modified to align with the Changes to the Traffic Management Company Registration Scheme.

### 2.3 Section 2.4 – Traffic Modelling

Guidelines are in final approval process and will be published in the coming weeks.

### 2.4 Section 4.2.3 - Traffic Management Involving 'Complex Traffic Arrangements'

#### 2.4.1 Lane Closures on High-Speed High-Volume Roads

Updated to capture the South West region.

Item ii modified to include works outside of metropolitan area:

1. Occurs on a multilane road ~~in metropolitan area~~; and
2. Closes or diverts one or more lanes (includes emergency lanes); and
3. Occurs on any Freeway OR road with a permanent speed limit of 90 km/h or more (or a section of these roads where the speed limit is reduced due to traffic signals); and
4. Has a traffic volume of 15,000 vpd or more.

#### 2.4.2 Any plan at permanent traffic signals that requires

Clarified that closure of a traffic lane includes unsignalised turn lanes.

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### 2.4.3 40 km/h Temporary Speed Limit on High-Speed High-Volume Roads

Complex traffic arrangements to include:

Any plan that requires a 40 km/h temporary speed limit on roads that meet the following:

1. Occurs on a multilane road; and
2. Occurs on Freeway or road with a permanent speed limit of 90 km/h or more (or or a section of these roads where the speed limit is reduced due to traffic signals); and
3. Has a traffic volume of 15,000 vpd or more.

This was a requirement in the metropolitan area within section 5.3.3 of the Traffic Management at Roadworks on State Roads Policy and Application Guidelines which states:

*'40 km/h speed limits on high volume high-speed multilane roads should be avoided wherever possible. In the Metropolitan area, where it is not practical to do so the justification and risk mitigation shall be assessed and endorsed by an RTM.'*

### 2.4.4 AWTM / WTM On-site

Wording relocated from section 2.1.2 Traffic Management Company Registration:

Traffic management sites involving 'complex traffic arrangements' on Main Roads controlled roads, must have at least one person with either Worksite Traffic Management or Advanced Worksite Traffic Management accreditation on-site at all times when road workers are present.

## 2.5 Section 4.5 - Variation to Code

Previous wording was too vague and up to interpretation as to what constitutes 'a lesser standard' and who determines this. Wording updated to clarify:

*The Code of Practice, AS1742.3 and AGTTM contain mandatory requirements (must or shall) and recommendations (should). The application of these mandatory requirements and recommendations is intended to provide the optimal level of safety and traffic efficiency.*

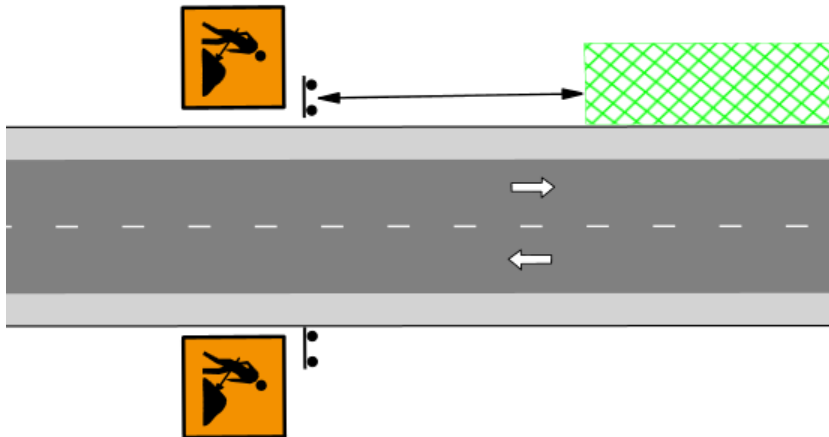
*Variations to these treatments may be undertaken as follows:*

- a. Where recommendations (should) are not adopted when preparing the TMP, this must be included within the risk assessment within the TMP.*
- b. Where mandatory requirements (must or shall) are not adopted in preparing a TMP, a risk assessment undertaken by a Roadworks Traffic Manager (see section 4.3) must be undertaken and the approval for the variation must be obtained from the relevant Road Infrastructure Manager using the Variation to Standards Application Form available from the Main Roads website [www.mainroads.wa.gov.au](http://www.mainroads.wa.gov.au); go to 'Technical & Commercial > 'Working on Roads' When undertaking the variation to standard the RTM must review and endorse the entire TMP.*

## 2.6 Section 6.1.9 - Sign Spacing

### Update:

Where there is only a single advanced sign, or single advance Multi Message Sign (MMS) frame, for approach speeds of 60 km/h or less, the sign may be positioned at the spacing shown in table 2.2 of AGTTM Part 3, i.e. the sign does not have to be double the spacing as required in section 2.5.3 of AGTTM Part 3.



**Figure 1: Example single advance sign**

*Note: sign may not be required on both sides of the road. Figure only shown to indicate a sign on both sides may still be considered a 'single advanced sign.'*

### Commentary

AS1742.3 – 2009 previously allowed for this sign spacing, inclusion of MMS Panels as this is the most common set up. The reduction in spacing is to acknowledge this speed environment is generally built up with many site constraints.

## 2.7 Section 6.3.1 Securing Signs

Previous requirement was to secure all signs with 4 sandbags, affixing to roadside furniture or using semi-permanent posts.

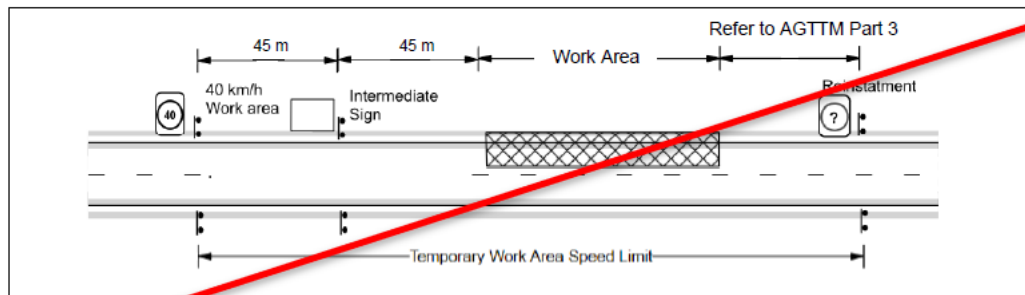
It was acknowledged that this was not a realistic or practical requirement and has led to the majority of sites being non-compliant. Following recent trials and anecdotal reports regarding the stability of signs, the section now allows for a relaxation of the number of sandbags if the offset to travel way is increased and accounts for the speed of passing traffic:

**Table 5 – Minimum sandbags to secure signs**

Permanent Speed Limit	Clearance of sign to travelled path	Minimum number of 10kg sandbags
90-110 km/h	1 m or less	4
	More than 1 m	2
70-80 km/h	1 m or less	3
	More than 1 m	2
60 km/h or less	any	2

## 2.8 Section 6.5.2 - Setting out Temporary Speed Zones (Buffer Zones)

Item (c) has been removed from figure 2, as the work area speed limit should be as short as possible to encourage compliance. Therefore ideally the intermediate sign should be in advance of the work area speed limit sign.



(c) L3 length extension due to intermediate advance signs (e.g. Prepare to Stop) – posted speed 60 km/h.

Table 5 has been modified for approach speeds of 70 km/h to align better with sign spacing:

**Table 5 - Placement of temporary speed limit (buffer zone) signs**

Approach Speed (km/h)	Works Area Speed (km/h)	80 km/h Speed Buffer Required	L1 (80km/h buffer) (m)	L2 (60km/h buffer) (m)	L3 (m)
110	80	No	N/A	N/A	220
	60	Yes	300	N/A	160
	40	Yes	300	200	90
100	80	No	N/A	N/A	200
	60	Yes	300	N/A	160
	40	Yes	300	200	90
90	80	No	N/A	N/A	180
	60	No	N/A	N/A	180
	40	No	N/A	200	90
80	60	No	N/A	N/A	160
	40	No	N/A	200	90
70	60	No	N/A	N/A	7090
	40	No	N/A	N/A	7090
60	40	No	N/A	N/A	45

## 2.9 Section 6.8 – Traffic Control

### 2.9.1 6.8.1 – Advance Warning Signs

Section 6.8.1 to be updated to align with AGTTM Part 3: for the STOP HERE ON RED SIGNAL or STOP HERE WHEN DIRECTED sign:

*The STOP HERE ON RED SIGNAL or STOP HERE WHEN DIRECTED sign must be placed **a minimum of 6 m** in advance of the PTCD/traffic controller position.*

The above change has been made following extensive consultation. There were reports of the position of the sign being placed at excessive distances from the TC/PTCD. This change aligns with other jurisdictions and the AGTTM Part 3.

### 2.9.2 6.8.2 – Avoiding End of Queue Collisions

Inclusion of 60 m Quad Road Train into table 11 (previously table 9).

### 2.9.3 6.8.3 - Portable Traffic Control Devices

It is acknowledged that ‘The use of portable traffic signals may cause confusion to road users, however boom barriers must be considered.’

Main Roads will look to further expand the use of PTCDs across the network to remove TCs from the line of fire.

There have been many reports of TCs standing too close to the roadway when operating the PTCD, following added to the section:

‘Refer to section 2.6.2 of AGTTM Part 7 for key considerations for determining a safe location for traffic controllers when using a PTCD. This location should be identified on the TGS. PTCDs primary benefit is separating the traffic controller from direct interaction with traffic. Generally, the traffic controller location should be a minimum of 3 m from the live traffic lane.’

## 2.9.4 6.8.6 – Shuttle flow

Removal of maximum queue length of 400 m. Inclusion of this figure has been noted as implying this distance is accepted, when generally this is far too long and should be avoided where possible. It has also been acknowledged at some locations with Quad Road Trains this can be reached very quickly and makes it difficult to meet.

The main issues are ensuring sufficient advance warning and sight distance to the end of queue and minimising delay time.

## 2.9.5 New section – 6.8.8 Traffic Control Near Intersections

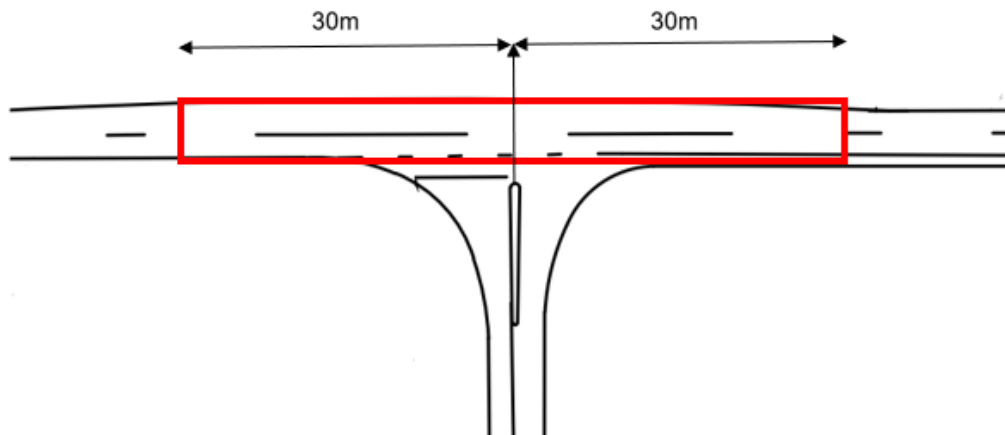
Following a recent near miss incident, wording to be included to clarify that a single traffic controller must not control both the through road and side road traffic when near an intersection.

*For the purpose of undertaking any form of Traffic Control the following will be considered two traffic approaches:*

- *Traffic entering from the side road<sup>1</sup> will enter the lane being controlled by a Traffic Controller and/or Portable Traffic Control Device (PTCD); and*
- *The centreline of the side road is within 30 m of the position of the STOP HERE WHEN DIRECTED or STOP HERE ON RED SIGNAL sign on the through road.*

*A single traffic controller must never control more than one traffic approach, therefore when both of the above will be met an additional Traffic Controller and/or PTCD must be positioned on the side road to control traffic entering the through road.*

*See figure 6 below, a Traffic Controller or PTCD must be positioned on the side road where traffic entering from the through road will be required to stop within the red boxed area.*



**Figure 6: Traffic control near a side road**

## 2.10 Section 6.9 - Truck Mounted Attenuators

Main Road expanding the use of TMAs to protect workers and road users by 1 July 2024, refer to the Code for further details.

<sup>1</sup> Side road includes accesses to shopping centres, service stations, etc.



## 2.11 Section 6.11 - Traffic Volume

Section modified to include traffic volume variations and to incorporate requirements from section 5.4 of Traffic Management at Roadworks on State Roads Policy and Application Guidelines.

### 6.11 TRAFFIC VOLUME

AGTTM Part 2 Traffic Management Planning (table 3.1) and Part 3 Static Worksites (table 2.4) provide details on the number of traffic lanes to be provided, these requirements are accepted in WA, the below table applies if varying from the desirable number of open lanes required in AGTTM. Approval for any variation to the traffic volume requirements detailed in AGTTM must be obtained from the relevant Road Infrastructure Manager.

	<u>Vehicles per hour per lane (AGTTM)*</u>	<u>Vehicles per hour per lane AWTM to undertake a Variation to Standard</u>	<u>Vehicles per hour per lane RTM to undertake a Variation to Standard</u>
<u>Mid-block (one direction)</u>	<u>1000 or less</u>	<u>Less than 1350</u>	<u>1350 or more</u>
<u>Within 200 m of an intersection** (one direction)</u>	<u>500* or less</u>	<u>Less than 675</u>	<u>675 or more</u>

**Table 19 – Variations to traffic volumes**

\*Prohibit right turns out of a single lane if the proportion of heavy vehicles and the volume of opposing traffic is high. Seek further assistance if needed.

\*\* As per AGTTM 'The word intersection applies where traffic in the considered direction is controlled by signals, a roundabout, stop/give way controls or other control devices.'

The traffic volumes shown in the table may need to be reduced under certain conditions as described below (taken direct from AGTTM for clarity):

- Reduced by 30% if the pavement surface is rough or unsealed.
- Reduced by 50% if the horizontal geometry through the work site is reduced to a speed value of less than 40 km/h.
- Reduced by 20% if the volume of heavy vehicles exceeds 10% and the road is downward, level or easy upgrade.
- Reduced by 40% if the volume of heavy vehicles exceeds 10% and the road has sustained upgrade > 5%.

#### **Traffic Volumes on Freeways and Grade Separated Motorways**

Roads with grade separation generally allow traffic to move more freely with fewer interruptions, therefor the below table may be used when determining the number of lanes to be provided. This table recognises that limiting the speed reductions on these roads may allow for a greater volume of traffic.

<u>Between ramps Maximum vehicles per hour per lane (one direction)</u>			<u>Within 200m of an entry-ramp* Maximum vehicles per hour per lane (one direction)</u>		
<u>40 km/h</u>	<u>60 km/h</u>	<u>80 km/h</u>	<u>40 km/h</u>	<u>60 km/h</u>	<u>80 km/h</u>
<u>1200</u>	<u>1400</u>	<u>1600</u>	<u>700</u>	<u>900</u>	<u>1100</u>

**Table 20: Traffic volumes on Grade Separated roads**

\*Applies from the start of the end of the gore area and start of the continuity or lane line see figure 1 below. This does not apply where the entry-ramp becomes an additional lane.

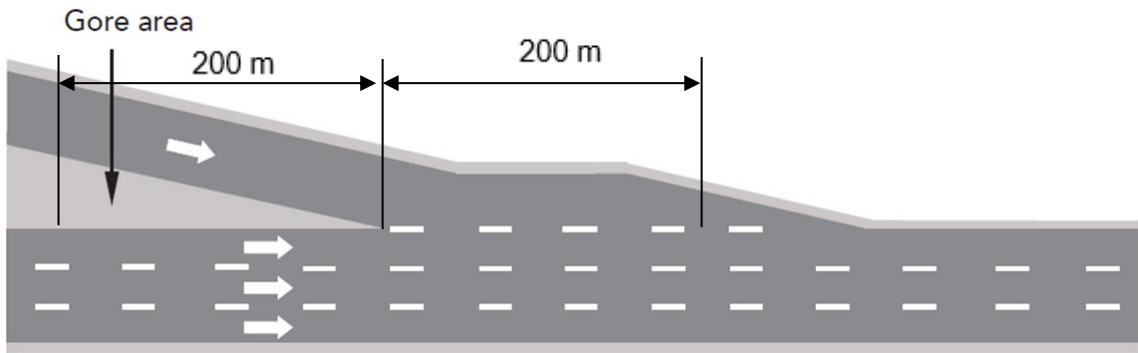


Figure 7: Entry Ramp – desirable traffic volume within 200 m up and downstream of the start of the continuity line or lane line

Table 20 can be used for short-term works and as a guide to long-term works. Where these maximum volumes are present at long-term work sites there will be a need to precisely calculate capacity to ensure that traffic demand can be met. Site-specific calculations are needed to show the relationship between traffic density and the ability of motorists to maintain speed. Site-specific variables need to be considered in the calculations such as lane width, alignment, surface condition and heavy vehicle mix etc. In part, this assessment is necessary to ensure traffic speed through the site is not constrained through the sheer traffic volume or heavy vehicle composition.

## 2.12 Section 6.15 - Traffic Cones and Bollards

New section:

*The first dot point of section 5.4.1 of AGTTM Part 3 states 'Maximum spacing of cones and bollards **must** be as shown in Table 5.3.'*

*In WA this should be replaced with:*

- *Maximum spacing of cones and bollards **should** be as shown in Table 5.3.*

## 2.13 Section 6.16- Speed Feedback Signs

Section relocated from 7.3. Now a requirement to be used under conditions noted.

## 2.14 Section 8 – Accreditation Requirements

### 2.14.1 Traffic Controller and Basic Worksite Traffic Management accreditation

Removal of the unit of competency RIIWHS201D – Work safely and follow WHS policies and procedures from the TC and BWTM pre-requisites.

The below is included in the Main Roads Provision of Service Agreement:  
The unit of competency RIIWHS201E – Work safely and follow WHS policies and procedures has not been included in either the Traffic Controller or Traffic Management Implementers skill sets and will not be delivered as part of the Austroads national training framework. It has therefore been determined this can be removed from the prerequisites for Traffic Controller and Basic Worksite Traffic Management.

The removal of this unit of competency allows training providers to continue to deliver WHS training and assessment that is better tailored and contextualised towards the temporary traffic management industry. The majority of the performance criteria and knowledge evidence should be retained.

The following should be noted:

- The course duration must not change, refer to section 2.3.4.1
- RTOs are free to continue training as is and deliver the unit of competency as part of the TC and/or BWTM courses

The following must be covered in the context of temporary traffic management:

ELEMENT	MODIFIED PERFORMANCE CRITERIA	Training / Assessment Method
1. Access and apply site safety procedures	1.2 Access, interpret and apply WHS documentation and procedures, such as JSA, SWMS, TGS, etc.	Training and written assessment. Practical assessment – ensure applying safe procedures during practical.
	1.4 Identify, act on and report breaches of worksite safety (incident report)	Training and written assessment – filling out incident report form.
2. Apply personal safety measures	2.1 Select and wear personal protective equipment	Training and written assessment Practical assessment.
	2.2 Establish and maintain a clean, tidy and safe working area 2.4 Apply safe lifting and manual handling procedures and techniques	Training and practical assessment
3. Apply operational safety measures	3.1 Recognise and respond to alarms	Training and written assessment
	3.5 Identify emergency escape routes and procedures	Training and written assessment Practical assessment – always ensure an escape path/route.

<b>ELEMENT</b>	<b>MODIFIED PERFORMANCE CRITERIA</b>	<b>Training / Assessment Method</b>
4. Maintain personal wellbeing	4.1 Identify risks to personal wellbeing and recognise preventative strategies 4.2 Identify, address and report situations which may endanger others	Training and written assessment
5. Identify and report incidents	5.1 Recognise and report incidents and injuries to relevant personnel 5.2 Prepare written records of incidents and injuries according to workplace procedures 5.3 Contribute to workplace incident investigations	Training and written assessment

<b>Knowledge Evidence</b>	<b>Training / Assessment method and reference to Performance Criteria (PC).</b>
Key legislation required to work safely and follow WHS policies and procedures Equipment Safety procedures:	Training and written assessment refer to PC 1.2
Fitness of duty policies, including: <ul style="list-style-type: none"> <li>• Smoking restrictions</li> <li>• alcohol impairment</li> <li>• improper use of drugs</li> <li>• Illness</li> </ul>	Training and written assessment refer to PC 1.2, 1.4 and 4.2
Workplace management procedures, including: <ul style="list-style-type: none"> <li>• Consultation</li> <li>• safety representatives</li> <li>• committees</li> <li>• dispute resolution</li> </ul>	Training and written assessment refer to PC 1.2.
Emergency situations, including: <ul style="list-style-type: none"> <li>• incident and injury</li> <li>• fire</li> <li>• evacuation</li> <li>• electrical shock</li> <li>• Falls</li> <li>• Explosions</li> <li>• extreme weather</li> <li>• key emergency equipment</li> <li>• emergency escape routes</li> <li>• any situation that poses an immediate risk to health, life, property and environment</li> </ul>	Training and written assessment refer to PC 1.4, 3.1, 3.5, 4.1 and 4.2
Use of personal protective equipment, including: <ul style="list-style-type: none"> <li>• skin protection</li> <li>• hearing protection</li> <li>• eye protection</li> <li>• protective clothing and ensembles</li> <li>• any other relevant protective equipment that will protect the wearer from injury</li> </ul>	Training and written assessment refer to PC 2.1.

Knowledge Evidence	Training / Assessment method and reference to Performance Criteria (PC).
Principles and techniques for manual lifting	Training refer PC 2.4
Biological effects that affect work activities, including: <ul style="list-style-type: none"> <li>• sleep</li> <li>• alertness</li> <li>• fatigue</li> <li>• stress</li> <li>• heat stress</li> <li>• hypothermia</li> </ul>	Training and written assessment refer PC 4.1 and 4.2.

### 2.14.2 Operate Truck Mounted Attenuator

Following extensive industry consultation it has been acknowledged that there will be a potential shortage of TMA Operators when the use of TMAs is expanded in July 2024. The current heavy vehicle experience requirement is prohibiting people within the traffic management industry being able to undertake the training.

The experience requirement for operating heavy vehicles has been removed, as it is up to the Department of Transport to assess driver competency, and this has already occurred. Further, the TMA operator's employer, as the PCBU, has the duty of care ensure the driver, workers and road users' safety is not put at risk.

The unit of competency RIICOM201D – communicate in the workplace has been a prerequisite for BWTM accreditation for well over 3 years now. Therefor anyone that holds the BWTM will hold this unit, it has therefor been removed from the prerequisites.