

## **Manual**

**Queensland Guide to Temporary Traffic Management Part 5: Short-Term Low-Impact Worksites** 

November 2023



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## About this document

This document supplements the Austroads *Guide to Temporary Traffic Management Part 5*Short-Term Low-Impact Worksites, which identifies and details preferred temporary traffic management design and operational practices to be applied for short term low impact works on or near roads.

#### How to use this document

This document is designed to be read and applied together with the Austroads *Guide to Temporary Traffic Management Part 5: Short-Term Low-Impact Worksites* (AGTTM05-21 Edition 1.1). You must have access to the Guide to understand what applies in Queensland.

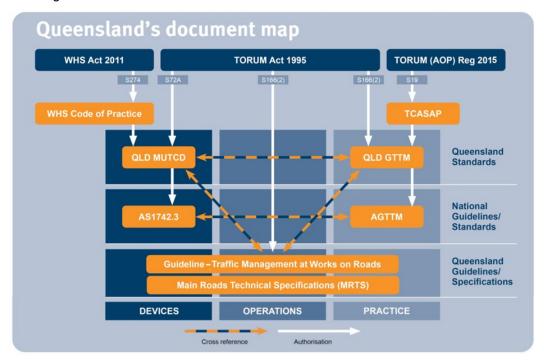
## This document:

- sets out how AGTTM05-21 applies in Queensland
- has precedence over AGTTM05-21 when applied in Queensland
- has the same section and clause numbering and headings as AGTTM05-21.

The following table summarises the relationship between AGTTM05-21 and this document:

Applicability	Meaning
Accepted	The Guide section or clause is accepted.
Accepted, with amendments	Part or all of the section or clause has been accepted with additions, deletions or differences.
New	There is no equivalent section or clause in the Guide.
Not accepted	The Guide section or clause is not accepted.

A summary of the documents relevant to TTM practice in Queensland, and their links, is provided following:



## References

The following references apply when reading AGTTM05-21.

Reference to	Means
AGTTM05-21	Austroads Guide to Temporary Traffic Management Part 5 Short Term Low Impact Worksites, as amended by this document: for example, a reference to AGTTM05-21 means you must refer to the Queensland Guide to Temporary Traffic Management (QGTTM) Part 5.
	Throughout AGTTM05-21, references are made to other parts of the Guide (for example, when reading Part 5 you may be referred to Part 3 for further information.) In this case, you must refer to the equivalent Part within the QGTTM. Check the applicability of the equivalent Part in the QGTTM <b>before</b> referring to the referenced Austroads Guide Part.
AGTTM	Austroads Guide to Temporary Traffic Management
AS 1742	Australian Standard AS 1742 Manual of Uniform Traffic Control Devices
Queensland (Q) series / Traffic Control (TC) signs	MUTCD (Q) series and TC signs.
Queensland MUTCD	Queensland Manual of Uniform Traffic Control Devices which supplements AS 1742.

# Relationship table (harmonised to AGTTM05-21 Edition 1.1)

Section		Description	Applicability
1	Introduct	tion	
	1.1	Purpose	Accepted
	1.2	Structure of AGTTM	Accepted
	1.3	Scope of Part 5	Accepted with amendments
	1.4	Application of Part 5 to New Zealand	Accepted
	1.5	Definitions	Accepted
2	Design p	rocess	
	2.1	General	Accepted with amendments
	2.2	Risk assessment	Accepted with amendments
	2.2.1	Risk considerations	Accepted
	2.2.2	Specific considerations for short-term low impact works	Accepted
	2.3	Design balance	Accepted
	2.4	Essential design principles	Accepted
	2.4.1	Sight distance	Accepted
	2.4.2	Signs	Accepted with amendments
	2.4.3	Road categories	Accepted
	2.4.4	Lane width	Accepted with amendments
	2.4.5	Traffic volumes	Accepted
	2.4.6	Speed	Accepted
	2.5	Variations to design	Accepted with amendments
3	General of	considerations	
	3.1	Restrictions on use	Accepted with amendments
	3.2	Short-term low-impact options	Accepted with amendments
	3.3	Vulnerable road users	Accepted
	3.4	Vehicle-mounted warning devices	Accepted with amendments
	3.5	Lookout protection method	New
	3.6	Combining different works protection methods	New
4	Works or	n road – within traffic lane	
	4.1	Work protected by specialist vehicles	Accepted
	4.1.1	General	Accepted
	4.1.2	Truck-mounted attenuators	Accepted with amendments
	4.2	Work between gaps in traffic	Accepted
	4.2.1	Description	Accepted
	4.2.2	Criteria	Accepted with amendments
	4.2.3	Traffic control devices	Accepted with amendments

Se	ction	Description	Applicability
	4.2.4	Pre-installation processes	Accepted with amendments
4.2.5		Installation (TGS instruction)	Accepted with amendments
		Close out process	Accepted
		Short-term works in traffic	Accepted
	4.3.1	Description	Accepted
	4.3.2	Criteria	Accepted
	4.3.3	Traffic control devices	Accepted with amendments
	4.3.4	Pre-installation processes	Accepted with amendments
	4.3.5	Installation (TGS) instruction	Accepted with amendments
	4.3.6	Close out process	Accepted
	4.4	Frequently changing work area – in lane	Accepted
	4.4.1	Description	Accepted with amendments
	4.4.2	Criteria	Accepted
	4.4.3	Traffic control devices	Accepted with amendments
	4.4.4	Pre-installation processes	Accepted
	4.4.5	Installation (TGS instruction)	Accepted with amendments
	4.4.6	Close out processes	Accepted
	4.5	Constantly moving work area – in lane	Accepted
	4.5.1	Description	Accepted with amendments
	4.5.2	Criteria	Accepted with amendments
	4.5.3	Traffic control devices	Accepted with amendments
	4.5.4	Pre-installation processes	Accepted
	4.5.5	Installation (TGS instruction)	Accepted with amendments
	4.5.6	Close out processes	Accepted
5	Works o	utside of traffic lane	
	5.1	Shoulders, medians, verges and footpaths with workers on foot or small plant items only	Accepted
	5.1.1	Description	Accepted
	5.1.2	Criteria	Accepted
	5.1.3	Traffic control devices	Accepted with amendments
	5.1.4	Pre-installation processes	Accepted with amendments
	5.1.5	Installation (TGS instruction)	Accepted with amendments
	5.1.6	Close out processes	Accepted
	5.2	Shoulders, medians, verges and footpaths with large plant items only	Accepted
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	5.2.3	Traffic control devices	Accepted with amendments

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	5.2.5	Installation (TGS instruction)	Accepted with amendments
	5.2.6	Close out processes	Accepted
	5.3	Frequently changing work area outside of a traffic lane	Accepted
	5.3.1	Description	Accepted with amendments
	5.3.2	Criteria	Accepted
	5.3.3	Traffic control devices	Accepted with amendments
	5.3.4	Pre-installation processes	Accepted with amendments
	5.3.5	Installation (TGS instruction)	Accepted with amendments
5.3.6 Close out processes		Close out processes	Accepted
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	5.4.2	Criteria	New
	5.4.3	Traffic control devices	New
	5.4.4	Pre-installation processes	New
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## 1 Introduction

## 1.3 Scope of Part 5

#### Difference

#### Replace:

AGTTM Part 5 provides guidance to designers on TTM at road worksites. This design is typically prepared in the form of a traffic guidance scheme (TGS) which is subsequently applied by field staff when installing these schemes at road worksites.

#### with:

QGTTM Part 5 provides guidance for a range of TTM professionals including Traffic Management Designers (TMD), Traffic Management Implementers (TMI) and TTM workers with *Working in Proximity to Traffic Awareness – Part 2* competency as follows:

- A TMD may be required to prepare / design a TGS in accordance with the provisions in this Part, which is subsequently applied by field staff when installing these schemes at road worksites. TGS designs for short-term low-impact works) may form part of a generic TGS selection system designed by the TMD.
- When implementing or removing a TGS, a TMI will select, design, and use one of the work protection methods outlined in this Part.
- TTM workers with *Working in Proximity to Traffic Awareness Part 2* competency, may also select, design, and implement the works protection methods (excluding activities involving grading, protection by a shadow vehicle, or Sections 4.1, 4.4 and 4.5) outlined in this Part. Also refer to QGTTM Part 8 Table A7.

## 2 Design process

#### 2.1 General

## Addition

Note that, for Part 5 work protection methods only, a TGS could be in the form of a work method statement for short-term low- impact works.

A TMP may not be required for short term low impact works conducted in accordance with this Part, as the required on-site risk assessment will deliver a similar outcome.

#### 2.2 Risk assessment

#### Difference

## Replace:

It is important to note that a Design Exceptions Report shall be approved by the relevant Road Infrastructure Manager (RIM) and road authority if design exceptions are made or published standards or the AGTTM are not adhered to.

#### with:

Where variations to the requirements of the Queensland MUTCD Part 3 or the QGTTM are required, they shall be documented by a risk assessment certified in accordance with Clause 1.9 of Queensland MUTCD Part 3.

## 2.4 Essential design principles

## 2.4.2 Signs

#### **Difference**

Replace the dot point:

sign support structures should be placed away from the edge of the roadway, see AS 1742.3

with:

sign support structures should be placed away from the edge of the roadway, and guidance on the placement of sign supports is given in the QGTTM Part 6 Section 6.6.2 and Queensland MUTCD Part 3 Clause 4.3.2.

## **Addition**

In line with the requirements of the Queensland MUTCD Part 3, a SURVEYORS AHEAD (TM1-37C, TM1-37-Q01) or LINE MARKERS AHEAD (TM1-40-Q01\_1) sign to indicate the presence of surveyors or line markers on foot may be substituted for a Workers (symbolic) sign when required in this Part.

## 2.4.4 Lane width

#### Difference

Replace Table 2.4 with the following.

Table 2.4 - Lane widths

Criteria	Lane width (m)	
General lane widths		
≤60 km/h	Minimum 3.0*	
70, 80 or 90 km/h	Minimum 3.2*	
≥100 km/h	Minimum 3.4*	
Curve with radius 100–250 m	Add curve widening of 0.5 m per lane	
Curve with radius <100 m	In addition to the curve widening of 0.5 m per lane, consider the swept path of long vehicles (for example, buses, trams)	
Two-way residential street	Minimum of 5.5 m (sum both ways)	

<sup>\*</sup>Temporary minimum lane widths are not to be greater than the existing lane widths. This minimum temporary lane width does not apply to curves of radius 250 m or less, or locations where there are fixed vertical obstructions such as fences or safety barriers within 30 cm of the edge of the lane on one or both sides. Where these conditions apply, consider widths wider than those listed above to accommodate large vehicles.

## 2.5 Variations to design

#### **Addition**

Refer to Clause 1.9 of the Queensland MUTCD Part 3.

#### 3 General considerations

## 3.1 Restrictions on use

## **Difference**

#### Replace:

Regardless of any risk assessment, if the speed limit, traffic volume, traffic clearance or occupation time constraints specified in this Part cannot be met, treatments of a fully protected static worksite (see AGTTM Part 3) or mobile works convoy (see AGTTM Part 4) must be applied. For many Category 3 roads, jurisdictions have determined that requirements of Part 5 are not applicable, instead choosing to undertake certain maintenance activities using static worksite practices, covered under Part 3 or Mobile work practices covered under Part 4.

#### with:

Regardless of any risk assessment, if the speed limit, traffic volume, traffic clearance or occupation time constraints specified in this Part cannot be met, treatments of a fully-protected static worksite (see QGTTM Part 3) or mobile works convoy (see QGTTM Part 4) must be applied.

# 3.2 Short-term low-impact options

## <u>Addition</u>

Add the following to Table 3.1

Type of works	Examples, not limited to	Duration*	See Section
Short-term works outside of a traffic lane	<ul> <li>road signs or street furniture maintenance</li> <li>litter or graffiti removal</li> <li>garden maintenance</li> <li>minor tree clearing</li> <li>minor cleaning of culverts, pipes and pits</li> <li>footpath repair</li> </ul>	<ul> <li>≤ 5 min if within         <ul> <li>1.2 m of a traffic lane</li> </ul> </li> <li>≤ 20 min if greater than 1.2 m from a traffic lane</li> </ul>	5.4
Traffic investigations	Traffic engineering investigations or inspecting, viewing or measuring a section of roadway or road feature (for example, for maintenance or planning purposes)	< one working shift	6.1
Road lighting or signal works	Maintenance and installation of power poles, lights, wires and traffic signals	<ul> <li>≤ 5 min if in a traffic lane or within 1.2 m of a traffic lane</li> <li>≤ 20 min if greater than 1.2 m from a traffic lane</li> <li>≤ 1 hour if the vehicle is positioned where parking would normally be permitted and does not obstruct the traffic flow</li> </ul>	6.2

## 3.4 Vehicle Mounted Warning Device

## Difference

Replace items 1 and 2:

- 1. A single flashing yellow lamp
  - for emergency or other infrequent use on a vehicle not normally used for roadworks purposes
  - for an inspection vehicle
  - for use on a plant item working wholly within a static work area (see AGTTM Part 3)
- 2. A pair of flashing yellow lamps
  - for use on vehicles (e.g. patrol trucks) working on roads with traffic volumes up to 1500 vpd
  - positioned on the vehicle so that at least one (preferably both) lamps are visible from any direction

#### with:

- 1. A single flashing yellow lamp
  - for emergency or other infrequent use on a vehicle not normally used for roadworks purposes
  - for an inspection vehicle, or
  - for use on a plant item working within a roadworks site.
- 2. A pair of flashing yellow lamps
  - for use on work vehicles on all roads without the protection of a static roadworks site (see QGTTM Part 3)
  - positioned on the vehicle so that at least one (preferably both) lamps are visible to all road users from any direction, and
  - additional flashing yellow lamps may be required to be added on the vehicle to ensure visibility is provided to all road users in any direction.

## 3.5 Lookout protection method

#### <u>New</u>

For requirements and further information on the Lookout Protection Method, refer to the <u>Guideline – Traffic Management at Works on Roads</u>.

## 3.6 Combining different works protection methods

## New

Combining different works protection methods at the one site is permitted where the requirements for the different works protection methods are met.

Different short-term low-impact provisions may be used for different activities when appropriate and when satisfying the risk assessment and other provisions and criteria at the one work site.

Short-term low-impact provisions may be used when appropriate and when satisfying the risk assessment and other provisions and criteria on a static work site where the temporary traffic management arrangements at the static work site are in place and required for other work activities. The static site must not be created solely for enabling a speed reduction which would permit short-term low-impact work protection methods which require a lower speed limit then applies to be used.

Where appropriate, and when satisfying the risk assessment and other provisions and criteria, short-term low-impact provisions may be used as part of a mobile work site.

Signs and devices used in static works sites or for mobile works must be installed in accordance with the requirements of QGTTM Part 3 or Part 4 respectively.

#### 4 Works on road – within traffic lane

## 4.1 Work protected by specialist vehicles

#### 4.1.2 Truck-mounted attenuators

## Addition

Add after the 4th paragraph:

The TMA clear distance shall not be reduced to a value below 40 m.

#### Addition

Only TMAs included on the current list of accepted products in the Transport and Main Roads <u>Accepted Road Safety Barrier Systems and Devices</u> document shall be used at roadwork sites in Queensland.

#### 4.2 Works between gaps in traffic

#### 4.2.2 Criteria

## Addition

Add the following to the Notes for Table 4.1:

If the work vehicle and equipment in criteria 7 are parked where parking would be legal and the safety of other road users is not compromised, answer 'yes' to this criterion.

#### Addition

If a lookout person is in use, and a vehicle-mounted warning device is applicable (see Section 4.2.5 for examples where the vehicle-mounted device is not required), the minimum sight distance from approaching road users to the vehicle-mounted warning device shall be as per the sight distance requirements for lookouts in Table 4.3.

## 4.2.3 Traffic control devices

#### Difference

Replace entire Section 4.2.3 with the following:

Refer to Section 3.4 for vehicle mounted warning device requirements.

## 4.2.4 Pre-installation processes

#### Addition

If a TGS is provided, confirm the TGS has been signed off by relevant personnel, with a copy of the TGS onsite at all times during the works.

## 4.2.5 Installation (TGS instruction)

#### Addition

A TGS may be developed and included in a generic TGS selection system for works between gaps in traffic activities.

## **Addition**

In the subsection 'Operation', add the following:

The work vehicle is parked clear of moving traffic lanes or parked where parking would be legal, and the safety of other road users is not compromised.

When using lookouts in Queensland, additional guidance and requirements for the Lookout Protection Method, in the <u>Guideline – Traffic Management at Works on Roads</u> shall be applied.

#### Difference

In the subsection 'Operation', replace the note under Table 4.3:

Note: \*These distances are based on a maximum distance of 3.5 m between road workers' location and their escape to a shoulder or median. For longer escape routes seek specialist design guidance as additional sight distance will be required.

with

Note: \*These distances are based on a maximum distance of 3.5 m between road workers' location and their escape to a shoulder or median. For longer escape routes additional sight distance will be required and the sight distance provisions for the Lookout Protection Method, in the *Guideline – Traffic Management at Works on Roads* shall be applied.

#### 4.3 Short term works in traffic

#### 4.3.3 Traffic control devices

#### Difference

Replace entire Section 4.3.3 with the following:

Refer to Section 3.4 for vehicle mounted warning device requirements.

## 4.3.4 Pre-installation processes

## <u>Addition</u>

If a TGS is provided, confirm the TGS has been signed off by relevant personnel, with a copy of the TGS onsite at all times during the works.

## 4.3.5 Installation (TGS instruction)

#### Addition

A TGS may be developed and included in a generic TGS selection system for short term works in traffic activities.

#### Difference

In the subsection 'Operation', replace:

At all times when conducting these activities, the lookout person and worker must be within a reasonable proximity (no more than 40 m) of the vehicle with a vehicle mounted warning device, which is parked clear of traffic lanes.

with

At all times when conducting these activities, the lookout person and worker must be within a reasonable proximity (no more than 40 m) of the vehicle with a vehicle mounted warning device, which is parked clear of traffic lanes or parked where parking would be legal, and the safety of other road users is not compromised.

#### Addition

In the subsection 'Operation', add the following:

When using lookouts in Queensland, additional guidance and requirements for the Lookout Protection Method, in the *Guideline – Traffic Management at Works on Roads* shall be applied.

#### Difference

In the subsection 'Operation', replace the note under Table 4.6:

Note: \*These distances are based on a maximum distance of 3.5 m between road workers' location and their escape to a shoulder or median. For longer escape routes seek specialist design guidance as additional sight distance will be required.

with

Note: \*These distances are based on a maximum distance of 3.5 m between road workers' location and their escape to a shoulder or median. For longer escape routes additional sight distance will be required and the sight distance provisions for the Lookout Protection Method, in the *Guideline – Traffic Management at Works on Roads* shall be applied.

## 4.4 Frequently changing work area – in lane

## 4.4.1 Description

#### Addition

Add the following note to Figure 4.4:

Advance warning signs are required in both directions for two-lane, two-way roads and undivided multilane roads.

#### 4.4.3 Traffic control devices

#### Difference

In the subsection 'Vehicle mounted warning device', replace entire subsection with the following:

Refer to Section 3.4 for vehicle mounted warning device requirements.

## 4.4.5 Installation (TGS instruction)

#### Difference

In the subsection 'Set-out', replace the following:

All signs and devices shall be placed as shown on the TGS. The preferred order to erect signs and devices is as follows:

with:

A TGS is required for frequently changing work area – in lane works, and all signs and devices shall be placed as shown on the TGS.

The preferred order to erect signs and devices is as follows:

## **Difference**

In the subsection 'Operation', replace the following:

See AS 1742.3 for more information.

with:

Guidance on the placement of signs is given in the QGTTM Part 6 Section 6.6.2 and Queensland MUTCD Part 3 Clause 4.3.2.

#### Addition

In the subsection 'Operation', add the following:

When using lookouts in Queensland, additional guidance and requirements for the Lookout Protection Method, in the *Guideline – Traffic Management at Works on Roads* shall be applied.

#### **Difference**

In the subsection 'Operation', replace the note under Table 4.8:

Note: \*These distances are based on a maximum distance of 3.5 m between road workers' location and their escape to a shoulder or median. For longer escape routes seek specialist design guidance as additional sight distance will be required.

with

Note: \*These distances are based on a maximum distance of 3.5 m between road workers' location and their escape to a shoulder or median. For longer escape routes additional sight distance will be required and the sight distance provisions for the Lookout Protection Method, in the <u>Guideline – Traffic Management at Works on Roads</u> shall be applied.

## 4.5 Constantly moving work area – in lane

#### 4.5.1 Description

#### Addition

Add the following note to Figure 4.5:

Advance warning signs are required in both directions for two-lane, two-way roads and undivided multilane roads.

#### 4.5.2 Criteria

#### Addition

The minimum sight distance from approaching road users to the vehicle-mounted warning device shall be as per the sight distance requirements for lookouts in Table 4.11.

#### 4.5.3 Traffic control devices

## **Difference**

In the subsection 'Vehicle mounted warning device', replace entire subsection with the following:

Refer to Section 3.4 for vehicle mounted warning device requirements.

## 4.5.5 Installation (TGS instruction)

#### **Difference**

In the subsection 'Set-out', replace the following:

All signs and devices shall be placed as shown on the TGS. The preferred order to erect signs and devices is as follows:

with:

A TGS is required for constantly moving work area – in lane works, and all signs and devices shall be placed as shown on the TGS.

The preferred order to erect signs and devices is as follows:

#### **Difference**

In the subsection 'Operation', replace the following:

See AS 1742.3 for more information.

with:

Guidance on the placement of signs is given in the QGTTM Part 6 Section 6.6.2 and Queensland MUTCD Part 3 Clause 4.3.2.

#### Addition

In the subsection 'Operation', add the following:

When using lookouts in Queensland, additional guidance and requirements for the Lookout Protection Method, in the <u>Guideline – Traffic Management at Works on Roads</u> shall be applied.

#### Difference

In the subsection 'Operation', replace the note under Table 4.11:

Note: \*These distances are based on a maximum distance of 3.5 m between road workers' location and their escape to a shoulder or median. For longer escape routes seek specialist design guidance as additional sight distance will be required.

with

Note: \*These distances are based on a maximum distance of 3.5 m between road workers' location and their escape to a shoulder or median. For longer escape routes additional sight distance will be required and the sight distance provisions for the Lookout Protection Method, in the <u>Guideline – Traffic Management at Works on Roads</u> shall be applied.

## 5 Works outside of traffic lane

# 5.1 Shoulders, medians, verges and footpaths with workers on foot or small plant items only

#### 5.1.3 Traffic control devices

## **Addition**

In the subsection 'Advance warning signs', add the following:

The Worker (symbolic) may be omitted when workers on foot are either

- 1. not visible to traffic, or
- 2. visible and located greater than 6 m clear of traffic, or
- 3. located outside the road reserve.

#### <u>Difference</u>

In the subsection 'Vehicle mounted warning device', replace entire subsection with the following:

Refer to Section 3.4 for vehicle-mounted warning device requirements.

#### 5.1.4 Pre-installation processes

## Difference

Replace 3<sup>rd</sup> dot point:

 Confirm TGS has been signed off by relevant personnel, with a copy of the TGS onsite at all times during the works.

#### with:

• If a TGS is provided, confirm TGS has been signed off by relevant personnel, with a copy of the TGS onsite at all times during the works.

## 5.1.5 Installation (TGS instruction)

#### Difference

In the subsection 'Set-out', replace:

All signs and devices must be placed as shown on the TGS. Advance signs are to be located a distance as per Table 2.3 from the start of the worksite or hazard.

Vehicles used to install signage and equipment shall have a yellow flashing lamp(s) that is visible to all approaching traffic.

Before any equipment or materials are brought onto the work area, a drive through check of the work site traffic management set up should be made in all directions, including all side roads if required. This is to confirm that the work area is safe for all workers and road users, and signs and devices are placed as indicated on the TGS.

#### with:

A TGS is not required but may be developed for shoulders, medians, verges and footpaths with workers on foot or small plant items only activities. If provided, all signs and devices shall be placed as shown on the TGS.

Advance signs are to be located a distance as per Table 2.3 from the start of the worksite or hazard.

Vehicles used to install signage and equipment must, at a minimum, have a yellow flashing lamp(s) visible to all approaching traffic.

Before any equipment or materials are brought onto the work area, a visual check of the worksite traffic management set up (vehicle-mounted warning devices and signs are in place, and sight distance requirements are met) should be made in all directions, including all side roads and property accesses if required. This is to confirm that the work area is safe for workers and road users, and signs and devices are placed as required by this section, or as indicated on the TGS (if provided). This may require a drive-through check.

## Difference

In the subsection 'Operation', replace:

See AS 1742.3 for more information

#### with:

Guidance on the placement of signs is given in the QGTTM Part 6 Section 6.6.2 and Queensland MUTCD Part 3 Clause 4.3.2.

## **Difference**

In the subsection 'Operation', replace:

The preferred location of the work vehicle is parked adjacent to the works with the vehicle mounted warning device activated and parked clear of traffic lanes.

with:

The preferred location of the work vehicle is parked adjacent to the works with the vehicle mounted warning device activated and parked clear of traffic lanes or parked where parking would be legal, and the safety of other road users is not compromised.

## 5.2 Shoulders, medians, verges and footpaths with large plant items only

#### 5.2.3 Traffic control devices

#### Addition

In the subsection 'Advance warning signs', add the following:

The ROAD PLANT AHEAD sign may be omitted when all plant is either:

- 1. not visible to traffic, or
- 2. visible and located greater than 6 m clear of traffic, or
- 3. located outside the road reserve.

#### Difference

In the subsection 'Vehicle mounted warning device', replace entire subsection with the following:

Refer to Section 3.4 for vehicle mounted warning device requirements.

## 5.2.4 Pre-installation processes

## Difference

Replace 3<sup>rd</sup> dot point:

• Confirm TGS has been signed off by relevant personnel, with a copy of the TGS onsite at all times during the works.

#### with:

• If a TGS is provided, confirm TGS has been signed off by relevant personnel, with a copy of the TGS onsite at all times during the works.

## 5.2.5 Installation (TGS instruction)

#### Difference

In the subsection 'Set-out', replace:

All signs and devices must be placed as shown on the TGS. Advance signs are to be located a distance as per Table 2.3 from the start of the work site or hazard.

Vehicles used to install signage and equipment must have a yellow flashing lamp(s) that is visible to all approaching traffic.

Before any equipment or materials are brought onto the work area, it is recommended that a drive- through check of the worksite traffic management set up be made in all directions, including all side roads if required. This is to confirm that the work area is safe for all workers and road users, and signs and devices are placed as indicated on the TGS.

#### with:

A TGS is not required but may be developed for shoulders, medians, verges and footpaths with large plant item only activities. If provided, all signs and devices shall be placed as shown on the TGS.

Advance signs are to be located a distance as per Table 2.3 from the start of the worksite or hazard.

Vehicles used to install signage and equipment must, at a minimum, have a yellow flashing lamp(s) visible to all approaching traffic.

Before any equipment or materials are brought onto the work area, a visual check of the worksite traffic management set-up (vehicle-mounted warning devices and signs are in place, and sight distance requirements are met) should be made in all directions, including all side roads and property accesses if required. This is to confirm that the work area is safe for all workers and road users, and signs and devices are placed as required by this section, or as indicated on the TGS (if provided). This may require a drive-through check.

## Difference

In the subsection 'Operation', replace:

See AS 1742.3 for more information.

#### with:

Guidance on the placement of signs is given in the QGTTM Part 6 Section 6.6.2 and Queensland MUTCD Part 3 Clause 4.3.2.

## 5.3 Frequently changing work area outside of a traffic lane

#### 5.3.1 Description

#### Difference

## Replace:

The preferred location of the work vehicle is adjacent to the work area with the vehicle mounted warning devices activated and parked clear of the traffic lane.

#### with:

The preferred location of the work vehicle is parked adjacent to the work area with the vehicle mounted warning device activated and parked clear of traffic lanes or parked where parking would be legal, and the safety of other road users is not compromised.

#### 5.3.3 Traffic control devices

## **Difference**

In the subsection 'Vehicle mounted warning device', replace entire subsection with the following:

Refer to Section 3.4 for vehicle mounted warning device requirements.

## 5.3.4 Pre-installation processes

## **Difference**

Replace 3<sup>rd</sup> dot point:

 Confirm TGS has been signed off by relevant personnel, with a copy of the TGS onsite at all times during the works.

#### with:

• If a TGS is provided, confirm TGS has been signed off by relevant personnel, with a copy of the TGS onsite at all times during the works.

## 5.3.5 Installation (TGS instruction)

#### Difference

In the subsection 'Set-out', replace:

All signs and devices must be placed as shown on the TGS. Advance signs are to be located a distance as per Table 2.3 from the start of the work site or hazard.

Vehicles used to install signage and equipment must have a yellow flashing lamp(s) that is visible to all approaching traffic.

Before any equipment or materials are brought onto the work area, it is recommended that a drive through check of the work site traffic management set up be made in all directions, including all side roads if required. This is to confirm that the work area is safe for all workers and road users, and signs and devices are placed as indicated on the TGS.

with:

A TGS is not required but may be developed for frequently changing work area outside of a traffic lane activities. If provided, all signs and devices shall be placed as shown on the TGS.

Advance signs are to be located a distance as per Table 2.3 from the start of the worksite or hazard.

Vehicles used to install signage and equipment must, at a minimum, have a yellow flashing lamp(s) visible to all approaching traffic.

Before any equipment or materials are brought onto the work area, a visual check of the worksite traffic management set-up (vehicle-mounted warning devices and signs are in place, and sight distance requirements are met) should be made in all directions, including all side roads and property accesses if required. This is to confirm that the work area is safe for all workers and road users, and signs and devices are placed as required by this section, or as indicated on the TGS (if provided). This may require a drive-through check.

#### Difference

In the subsection 'Operation', replace:

See AS 1742.3 for more information.

with:

Guidance on the placement of signs is given in the QGTTM Part 6 Section 6.6.2 and Queensland MUTCD Part 3 Clause 4.3.2.

#### 5.4 Short term works outside of a traffic lane

## 5.4.1 Description

#### New

Workers may work near the road without the use of advance warning signs, provided that the criteria listed in Section 5.4.2 are met. Examples of this type of work include (but are not limited to):

- road signs or street furniture maintenance
- litter or graffiti removal
- garden maintenance
- minor tree clearing
- minor cleaning of culverts, pipes and pits, and/or
- footpath repair

Prior to undertaking these work activities, a risk assessment shall be undertaken to ensure the works can be safely completed. Risk considerations are outlined in Section 2.2.1.

The typical TTM features of short term working outside a traffic lane include:

a) a lookout person (for works within 1.2 m of a traffic lane) as per Section 5.4.5, and

- b) a works vehicle
  - i. positioned as per Section 5.4.5, and
  - ii. with a vehicle-mounted warning device as per Section 5.4.3.

Figure 5.4.1(a) illustrates an example of short-term works outside a traffic lane (for works within 1.2 m of a traffic lane) and Figure 5.4.1(b) illustrates an example of short-term works outside a traffic lane (for works greater than 1.2 m from a traffic lane). The works vehicle placement should consider the impact on vulnerable road users including people riding bikes and the road worker should always have a clear exit path from the road and ensure that this is not blocked by the placement of the work vehicle or other obstacles.

Figure 5.4.1(a) – Short-term works outside a traffic lane (works within 1.2 m of a traffic lane)

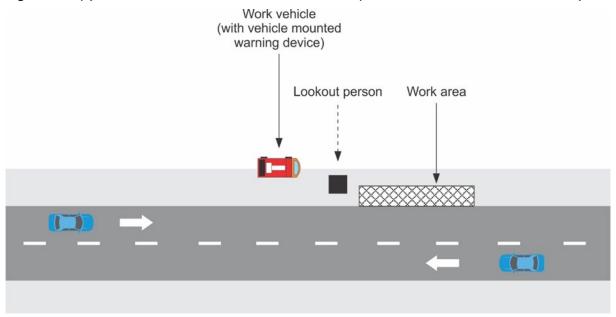
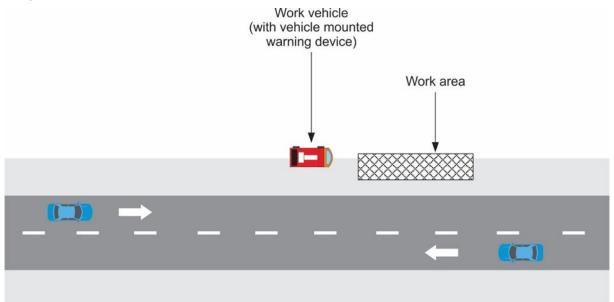


Figure 5.4.1(b) – Short-term works outside a traffic lane (works greater than 1.2 m from a traffic lane)



#### 5.4.2 Criteria

#### New

This type of traffic management arrangement shall only be used when the criteria outlined in Table 5.4.2(a) or Table 5.4.2(b) (as relevant) have been met.

Table 5.4.2(a) – Short term works outside a traffic lane – but within 1.2 m of a traffic lane

	Criteria	Yes / No
1	The work area is outside but within 1.2 m of a traffic lane.	
2	Works take 5 minutes or less.	
3*	A lookout person is available to warn workers on foot to vacate the roadway before the arrival of approaching traffic and meets the sight distance requirements of Table 5.4.5(a).  If there are no workers on foot answer 'Yes'.	
	*If the requirements of Table 5.4.5(b) are met, answer 'Yes'.	
4	Work vehicles and equipment are parked adjacent to the worker location and parked clear of moving traffic lanes or parked where parking would be legal and the safety of other road users is not compromised.	
5	A vehicle-mounted warning device is displayed on the work vehicle and has a minimum sight distance (see Table 5.4.2(c)) for approaching road users.	

<sup>\*</sup>Note: The lookout person may be dispensed with if the work task takes 10 seconds or less to complete and the sight distance of approaching traffic to both the vehicle-mounted warning device and worker is a minimum distance as shown in Table 5.4.5(b). The worker shall be required to be aware of the approaching vehicles within the distance if no lookout person is required.

Table 5.4.2(b) – Short term works outside a traffic lane – greater than 1.2 m from a traffic lane

	Criteria	Yes / No
1	The work area is greater than 1.2 m from a traffic lane.	
2	Works take 20 minutes or less.	
3	Work vehicles and equipment are parked adjacent to the worker location and parked clear of moving traffic lanes or parked where parking would be legal, and the safety of other road users is not compromised.	
4	A vehicle-mounted warning device is displayed on the work vehicle and has a minimum sight distance (see Table 5.4.2(c)) for approaching road users.	

If two or more locations within a space of 2 km or less require work to be undertaken, the methods of a frequently changing work area (see Section 5.3) shall apply.

If work durations exceed the limits in Tables 5.4.2(a) or 5.4.2(b), consider the use of Sections 5.1 or 5.2 as appropriate.

If any of the criteria stated previously cannot be achieved or alternative treatments detailed in this Part cannot be used, the treatments of a fully protected static worksite (see QGTTM Part 3) or mobile works convoy (see QGTTM Part 4) shall be applied.

Table 5.4.2(c) – Sight distance to the vehicle-mounted warning device

Speed (km/h)	Distance (m)
≤ 45	80
46–55	100
56–65	120
66–75	140
76–85	160
86–95	180
96–105	200
≥ 106	220

#### 5.4.3 Traffic control devices

#### New

Refer to Section 3.4 for vehicle mounted warning device requirements.

## 5.4.4 Pre-installation processes

## New

Prior to works being conducted on site, the following checks shall be undertaken:

- a) risk assessment shall be conducted, to confirm that factors such as traffic volume and speed, road geometry and width, and the general behaviour of road users are considered when determining the appropriate traffic management arrangement
- b) work health and safety paperwork, such as job safety awareness forms, shall be completed and signed off by the supervisor or relevant person
- c) if a TGS is provided, confirm TGS has been signed off by relevant personnel, with a copy of the TGS onsite at all times during the works
- d) appropriate personal protective equipment shall be used
- e) all required devices / equipment shall be checked and accounted for prior to leaving for site, and
- f) appropriate recordkeeping methods are in place.

## 5.4.5 Installation (TGS instruction)

#### New

Short-term works outside a traffic lane do not require a TGS diagram when the works are completed in accordance with this section; however, a TGS may be developed and included in a generic TGS selection system for short-term works outside of a traffic lane activities. If provided, all signs and devices shall be placed as shown on the TGS.

Before any equipment or materials are brought onto the work area, a visual check of the worksite traffic management set-up (vehicle-mounted warning devices and lookout (if required) are in place, and sight distance requirements are met) should be made in all directions, including all side roads and property accesses if required. This is to confirm that the work area is safe for all workers and road users, and signs and devices are placed as required by this section, or as indicated on the TGS (if provided).

#### Operation

Equipment or materials which are brought onto the work area should be unloaded from the non-traffic side of a stationary work vehicle.

The work vehicle shall be located clear of traffic or parked where parking would be legal, and the safety of other road users is not compromised, and is adjacent to, or on approach (within 40 m), to the worksite in the primary direction of travel to the works if undertaking works in a single location. The works vehicle is the primary traffic management warning device for short-term works outside a traffic lane. If it is not possible to locate the work vehicle as described, for example due to inability to find an appropriate area to park the vehicle, then this works practice shall not be used.

The vehicle-mounted warning device shall be on at all times while work is in progress.

The lookout person (for works within 1.2 m of a traffic lane) shall be positioned adjacent to the worker so that they can view approaching traffic in time to warn workers to vacate the roadway before arrival of traffic. The recommended sight distance at which the lookout person should be able to see approaching traffic is as per Table 5.4.5(a). This distance allows for the worker to respond to a warning and vacate the roadway. When using lookouts in Queensland, additional guidance and requirements for the Lookout Protection Method in the <u>Guideline – Traffic Management at Works on Roads</u> shall be applied.

At all times when conducting these activities, the lookout person (for works within 1.2 m of a traffic lane) and worker shall be within a reasonable proximity (no more than 40 m) of the vehicle with a vehicle-mounted warning device, which is parked clear of traffic lanes, and the safety of other road users is not compromised.

Variable message signs may be used for short-term works outside a traffic lane as a means of secondary protection to workers. The use of variable message signs shall be within 40 m of workers. A distance of greater than 40 m between the variable message sign and workers may be misleading to approaching road users about the location of works.

Table 5.4.5(a) – Sight distance for lookout person – Short term works outside a traffic lane – but within 1.2 m of a traffic lane

Speed (km/h)	Distance (m)*
≤ 45	80
46–55	100
56–65	120
66–75	140
76–85	160
86–95	180
96–105	200
≥ 106	220

<sup>\*</sup> Note: These distances are based on a maximum distance of 3.5 m between road workers' location and their escape to a shoulder or median. For longer escape routes additional sight distance will be required and the sight distance provisions for the Lookout Protection Method, in the <u>Guideline – Traffic Management at Works on Roads</u> shall be applied.

Table 5.4.5(b) – Sight distance to both the vehicle-mounted warning device and the worker – Short term works outside a traffic lane – but within 1.2 m of a traffic lane – lookout not required

Speed (km/h)	Distance (m)
≤ 45	140
46–55	180
56–65	210
66–75	250
76–85	280
86–95	320
96–110	350
> 110	A lookout person is required

## 5.4.6 Close out process

New

## **Daily records**

Daily records of the site layout including devices, risk assessments, sight distances, signs or TGS (if required), shall be kept in a diary or in work sheets, which must be retrievable upon request.

Reference to the diagram number which generally applies to the layout used or to a documented procedure is usually sufficient. Any significant departures from, or additions to, the signs and devices included in the relevant diagram(s) should be noted and approved.

#### Incidents

In the case of incidents (for example, crashes, collisions), either witnessed or reported, involving the public or from which legal proceedings might arise, the actual type, size and location of signs and devices in use at the time of the accident shall be recorded with the site layout and sign arrangement photographed for subsequent reporting. Details of the actual width and condition of the travelled path and weather conditions should also be recorded.

## 6 Traffic investigations, road lighting or signal works

## 6.1 Traffic investigations

#### 6.1.1 Description and criteria

#### New

Prior to undertaking these work activities, a risk assessment shall be undertaken to ensure the works can be safely completed. Risk considerations are outlined in Section 2.2.1.

For activities associated with traffic engineering investigations or inspecting, viewing or measuring a section of roadway or road feature (for example, for maintenance or planning purposes), no specific TTM controls are required where:

- a) the activity is clear of the roadway: the exception to this would be where the activity is carried out while crossing the road, for example, measuring the lane width if the activity cannot be carried out while crossing the road and may take longer to complete, the works may be undertaken in accordance with Section 4.2 (work between gaps in traffic)
- b) the vehicle used for the investigation is parked well clear of the traffic lanes or parked where parking would be legal and the safety of other road users is not compromised and a vehicle-mounted warning device in accordance with Section 3.4 is displayed on the work vehicle and has a minimum sight distance (see Table 6.1.1) for approaching road users
- c) personnel use existing footpaths or verges, and
- d) inspecting personnel may cross the road safely within gaps in traffic. In this case, the minimum sight distance to personnel for approaching drivers is to be as per Table 6.1.1.

Personnel carrying out investigations should wear high-visibility clothing at all times when they are not in their vehicles.

The works vehicle placement should consider the effect on vulnerable road users including cyclists and the road worker should always have a clear exit path from the road and ensure that this is not blocked by the placement of the work vehicle.

Traffic investigations do not require a TGS when the works are completed in accordance with this section; however, a TGS may be developed and included in a generic TGS selection system for traffic investigation activities.

Table 6.1.1 – Sight distance for personnel crossing roads from oncoming traffic and to the vehicle-mounted warning device

Speed (km/h)	Distance (m)
≤45	80
46–55	100
56–65	120
66–75	140
76–85	160
86–95	180
96–105	200
≥106	220

## 6.2 Road lighting or signal works

## 6.2.1 Description and criteria

#### New

Prior to undertaking these work activities, a risk assessment shall be undertaken to ensure the works can be safely completed. Risk considerations are outlined in Section 2.2.1.

Examples of work appropriate for this treatment include, but are not limited to, maintenance and installation of power poles, lights, wires and traffic signals.

Road lighting or signal works may be undertaken by workers on foot with a vehicle equipped with a vehicle-mounted warning device (see Section 3.4) without the use of advance warning signs under the following conditions:

- a) where the vehicle is positioned where parking is legal and the safety of other road users is not compromised, and the vehicle does not obstruct the traffic flow:
  - i. the maximum work period at any one location shall be one hour, and
  - ii. a minimum clearance of 5.5 m must be maintained above the road surface to any part of the maintenance vehicle that encroaches upon the open traffic lane, or
- b) where the vehicle is positioned other than outlined in Item a):
  - i. the maximum work period at any one location shall be:
    - A. five minutes if on the roadway or within 1.2 m of moving traffic, or
    - B. 20 minutes if within 3 m of moving traffic but more than 1.2 m from moving traffic, and
  - ii. the following sight distance to the vehicle-mounted warning device for approaching drivers shall be:
    - A. in a residential street, 75 m or to the end of the street, or
    - B. in all other locations, a minimum as per Table 6.2.1(a), and

- iii. the vehicle-mounted warning device shall not be obscured by either overhanging vegetation or a raised truck body, and
- iv. the work shall not reduce:
  - A. the overall width to less than required for safe passage for two-way traffic (or one-way traffic if the volume is less than 50 vehicles per day), or
  - B. the running lane width adjacent to a barrier line to less than that needed to allow vehicles to proceed without crossing the line.
- c) A lookout person shall be posted to warn workers on foot of the approach of any vehicle whose size or speed may constitute a safety threat. The lookout person is not required if the works are more than 1.2 m clear of moving traffic.

If required, the lookout person shall be positioned adjacent to the worker so that they can view approaching traffic in time to warn workers to vacate the roadway before arrival of traffic. The recommended sight distance at which the lookout person should be able to see approaching traffic is as per Table 6.2.1(b). This distance allows for the worker to respond to a warning and vacate the roadway.

When using lookouts in Queensland, additional guidance and requirements for the Lookout Protection Method, in the <u>Guideline – Traffic Management at Works on Roads</u> shall be applied.

The works vehicle placement should consider the effect on vulnerable road users including cyclists and the road workers should always have a clear exit path from the road and ensure that this is not blocked by the placement of the work vehicle.

Road lighting or signal works do not require a TGS when the works are completed in accordance with this section; however, a TGS may be developed and included in a generic TGS selection system for road lighting or signal works activities.

Vehicles used to install signage and equipment must, at a minimum, have a yellow flashing lamp(s) visible to all approaching traffic.

Before any equipment or materials are brought onto the work area, a visual check of the worksite traffic management set-up (vehicle-mounted warning devices and lookout (if required) are in place, and sight distance requirements are met) should be made in all directions, including all side roads and property accesses if required. This is to confirm that the work area is safe for all workers and road users, and signs and devices are placed as required by this section, or as indicated on the TGS (if provided).

Where the requirements of this section or another suitable section in this Part cannot be met, the treatments of a fully-protected static worksite (see QGTTM Part 3) or mobile works convoy (see QGTTM Part 4) shall be applied.

Table 6.2.1(a) – Sight distance to the vehicle-mounted warning device

Speed (km/h)	Distance (m)
≤45	80
46–55	100
56–65	120
66–75	140
76–85	160
86–95	180
96–105	200
≥106	220

Table 6.2.1(b) - Sight distance for lookout person

Speed (km/h)	Distance (m)*
≤ 45	80
46–55	100
56–65	120
66–75	140
76–85	160
86–95	180
96–105	200
≥ 106	220

Note: \*These distances are based on a maximum distance of 3.5 m between road workers' location and their escape to a shoulder or median. For longer escape routes additional sight distance will be required and the sight distance provisions for the Lookout Protection Method, in the <u>Guideline – Traffic Management at Works on Roads</u> shall be applied.