TCPTRAINING

RIIWHS205D

Control traffic with a stop/slow bat

(Formerly Blue Card)

Participant Manual

Please return this manual to the Trainer

Please do not write on this manual you will be provided with a workbook

NSW Government Roads and Maritime Services

July 2015

TCPTRAINING

Contents

Before you begin

This leaner guide is based on RIIWHS205D Control traffic with a stop slow bat (Traffic Controller) from the RII Infrastructure and Resources Training Package

Knowledge and Skills

The following is a list of the skills and knowledge required to control traffic at worksites, it includes;

- Stop/direct road users using a stop/slow bat and understand stopping sight distances
- Maintain traffic incident reports.
- Understand the Traffic Guidance Schemes (TGSs) also known as Traffic Control Plan (TCPs) for the site.
- Assess and respond to changes in the environment, for example traffic volumes, weather conditions, road conditions, Work Health and Safety (WHS) and operational requirements
- Carry out risk assessments for personal safety.
- Participate in toolbox talks (specific to traffic control).
- Use communication methods and devices.
- Conform to traffic control policy and procedures.
- site and equipment safety requirements
- traffic controlling requirements and procedures
- complying with traffic management plans
- erecting traffic control signage and barricades
- communication device operations
- determine equipment types, characteristics, technical capabilities and limitations
- operational and maintenance procedures for equipment
- describing the effects of travel speed and vehicle mass on stopping distances
- interpreting and implementing safe work method statement

Expectations

This is a level 2 mapped unit of competency from the RII Resources and Infrastructure Training Package

At this level you are expected to meet the following learner outcomes;

- Apply sound customer focus outcomes
- Apply all the skills and knowledge required for traffic controllers
- Manage and control traffic as per TCGS/TCP
- Demonstrate a strong understanding of traffic control and traffic controller authority
- Access and interpret workplace documentation suitable to the role
- Ability to utilise appropriate equipment and devices
- Have a strong and understanding of WHS requirements
- Have an understanding of the environment relevant to the role

Unit of Competency

RIIWHS205D	Control traffic with a stop slow bat
Application	This unit describes a participant's skills and knowledge required to control traffic with stop-slow bat in the Resources and Infrastructure Industries. This unit is appropriate for those working in operational roles. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and Industry sectors. Relevant information must be sourced prior to application of the unit.
Elements	**Performance Criteria**
1. Plan and prepare	1.1 Access, interpret and apply site traffic plan procedures and ensure the work activity is compliant 1.2 Obtain, confirm, clarify and apply work instructions 1.3 Obtain, confirm, clarify and apply safety requirements 1.4 Identify, obtain and implement signage and devices 1.5 Select tools and equipment, check for serviceability and rectify or report any faults 1.6 Identify, confirm, clarify and apply environmental protection requirements
2. Control traffic	2.1 Position or confirm temporary traffic signs and barriers 2.2 Direct traffic correctly 2.3 Control vehicles and pedestrian traffic and ensure safety 2.4 Monitor traffic, make adjustments for changing conditions and position waiting vehicles for smooth traffic flow 2.5 Use hand held stop/slow bats 2.6 Use visibly clear and unobstructed hand signals 2.7 Report traffic offenders
3. Operate communication devices	3.1 Adjust communication device controls for optimum reception/transmission results 3.2 Transmit messages clearly and concisely 3.3 Maintain communication device power supply 3.4 Check communications contact after nominated period of non-contact
4. Clean up	4.1 Remove or cover signs and devices sequentially to provide warning to motorists during shutdown 4.2 Clean, check, maintain and store tools and equipment

How to work through these materials

The learner guide is only part of the journey; to be successful you must ensure that you read all the relevant information in each section.

You will then be required to work with your trainer/assessor, workplace coach and colleagues to place the information into workplace context.

If there are activities throughout the learner guide, you are encouraged to completed these activities to compound the learning experience

Topics

The main topics covered in this Learner guide are:

- Plan and prepare the work site area to control traffic and pedestrians safely.
- Controlling traffic through and around a work site.
- Communicate and operate radios & signals to control traffic flow.
- Clean up equipment used to control traffic at the completion the task.

Introduction

Traffic control at worksites is provided to ensure a safe workplace for workers and to safely guide road users, through and around worksites. Work needs to be arranged so that workers are able to work safely and are separated from the road users where possible.

Traffic control at worksites shall only be undertaken by persons who are qualified, authorised and have passed approved training courses.

Controlling traffic can be achieved by ensuring that the correct arrangements are in place, such as the selection or design of Traffic Control Plans (TCP)/Traffic Control Guidance Schemes (TCGS) that devices and signage are installed correctly and significant measures are in place to minimise risk.

TCP/TCGS are part of an overarching Traffic Management Plan (TMP) although form the main component of the TMP.

Other documentation that may be included in a TMP may include;

- Legislative requirements
- Regulations
- Codes of practice
- Industry standards
- Company policy and procedures
- Manufacturer's guidelines and specifications

Preparation of a detail Traffic Management Plan and proper implementation of measures identified in the approved plan is essential to ensure the safety of all road users as well as the workers at site. It would also assure the smooth operation of the road network as well as the work site

On completion of this training the learner will;

- Understand the role of a Traffic Controller.
- Apply the procedures of traffic controlling within a worksite.
- Operate a 2-way radio correctly and effectively.

Traffic Controller responsibilities include

- Ensure personal safety from traffic
- Ensure other crew members safety from traffic
- Ensure signs are erected before starting
- Be polite and helpful to motorist and pedestrians
- Help increase job output
- Guide traffic around, past or through a worksite or temporary hazard
- Assist in the prevention of accidents
- Minimise delays to traffic

1. Plan and Prepare

1.1 Access, interpret and apply site traffic plan procedures and ensure the work activity is compliant

A traffic management plan is a plan detailing work to be undertaken and describing its impact on the general area, especially its impact on public transport and passengers, cyclists, pedestrians, motorists and commercial operations. It also describes how these impacts are being addressed.

It will also include details on Traffic control Guidance Schemes, and vehicle movement plans

Traffic control guidance schemes also know as Traffic Control plans are a major component of a TMP

Traffic management plans are designed to make sure that workzone traffic control is carried out in accordance with the relevant standards for traffic control for the jurisdiction in which the work is to be carried out

The work of setting up a traffic control work area starts with, and is determined by, a set of documents known as a ***traffic management plan (TMP)***.

A Traffic Management Plan provides the details of proposals to safely manage traffic during the conduct of works on roads and normally includes:

- **A traffic control guidance scheme (diagrams)** – An arrangement of temporary signs and devices to warn traffic and guide it through or past a work area or temporary hazard.
- Worksite hazard assessment, such as a Safe Work Method Statement

Details of the location, nature and duration of the works

The Traffic Management Plan aims to:

- Protect workers, road users and pedestrians.
- Adequately instruct and guide road users safely through, around or past the worksite.
- Provide appropriate warnings of changes in the road surface, driving conditions and of personnel/workers and plant engaged in work on or adjacent to the road.
- Minimise the impact of the works on traffic and adjacent landowners/occupiers.
- Minimise disruptions to public transport.
- Communicate the arrangements for and impacts of, any activities affecting traffic.

A Traffic Control Plan (TCP) should be available & followed on all sites.

The traffic controller shall direct traffic at and/or through a work site or other event in a manner specified in the approved operating procedure for the safety of all road users and road workers.

Traffic controllers

- must be qualified, having passed an approved Traffic Controllers training course, and shall be authorised to control traffic in their jurisdiction
- must be used if road users are to be directed to disobey a traffic regulation, such as crossing a barrier line (portable traffic signals may also be used to direct road users across barrier lines)
- Must act in accordance with the policies, procedures and/or codes of practice in their jurisdiction that govern traffic control

1.2 Obtain, confirm, clarify and apply work instructions

The Traffic Management Plan will provide specification about which signs and devices will be required and where they will need to be placed on the worksite (usually in the Traffic Control Plan/Diagram), information about the impact of the works on all road users, including public transport, pedestrians, cyclists and local residents/businesses.

It should also include information about traffic flow requirements and information about the environmental requirements for works at the site. In short, it should provide all of the information that you need to set up a work area for the management of traffic and to protect workers in the work area.

Work instructions can take many other forms, either verbally or in writing, including, but not limited to:

- Verbal or written and graphical instructions
- Signage
- Work schedules/plans/specifications
- Work bulletins
- Charts and hand drawings
- Memos
- Maps
- Safety Data Sheets
- Diagrams or sketches
- Safe work method statements (SWMS)
- Site checklists

Being able to access, interpret and apply the requirements of the documents is vital to carrying out your responsibilities for controlling traffic.

Understanding compliance documentation will help you make the right decisions for each situation or task. The documents will tell you what is required and how you are expected to perform the tasks.

When reading documents it is vital that you understand the difference between words such as **'should'** '**consider'** and '**must'**.

SHOULD – *Should* indicates a preferred course of action. If you take a different course of action your will need to be able to justify this in the event of an accident or incident.

CONSIDER – *Consider* means that you have a choice of actions and need to select the action that will give the best and safest result for the particular circumstances.

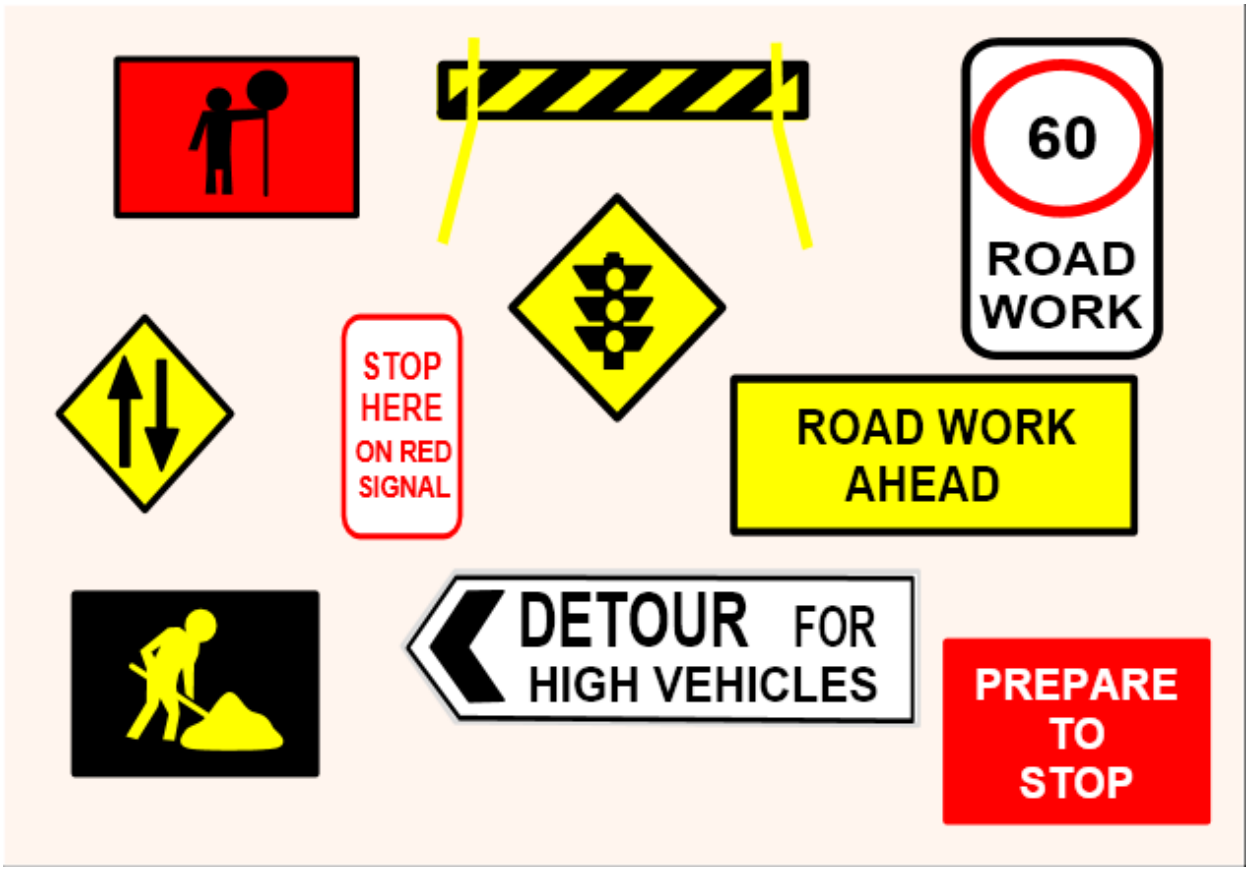
MUST, REQUIRES, MANDATORY, SHALL – *Must*, *Requires*, *Mandatory* and *Shall* all mean that the action is a legal requirement and MUST be complied with.

A Traffic Control Plan (TCP) or Traffic Control Guidance Scheme (TCGS) will contain information about where traffic controllers should be positioned in relation to the work site and about how they are expected to control traffic. The site supervisor, in most instances, will direct you where you need to position yourself to control traffic. Should a supervisor not be available, you will need to be able to access the TMP and interpret where you need to be positioned.

TCP's have a number of pieces of information

- Such as the types of signs needed
- Distances between these signs
- Flow of traffic
- Position of traffic controllers
- Work site areas
- Positions of traffic cones, just to name a few

Do you recognise any of these signs and devices? (not to scale)

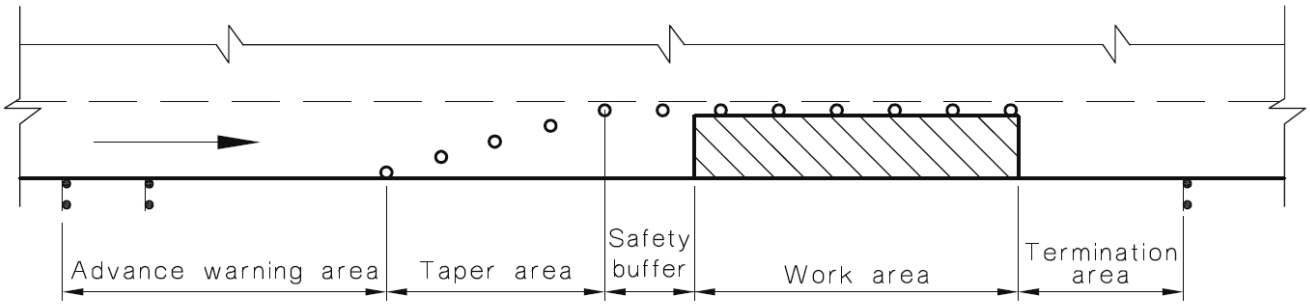


A traffic controller must:

- ensure personal safety from traffic
- ensure other crew members safety from traffic
- ensure (Symbolic) Traffic Controller and Prepare to Stop signs are displayed before starting
- guide traffic through or past the work area
- assist in the prevention of accidents
- help to increase job output
- minimise delays to traffic

- be polite and helpful to motorists, pedestrians and other road users
- not perform traffic control functions while adversely affected by a drug or other medication causing functional impairment
- not direct traffic through a worksite unless the worksite has an approach speed of 60km/h or less as required.
- only use equipment specified in the AS1742.3 Manual of Uniform Traffic Control Devices, Part 3 Works on Road (Australia)/Code of Practice for Temporary Traffic Management [CoPTTM] (New Zealand), to direct or divert traffic through a designated worksite
- ensure that the Traffic Controller Ahead/PREPARE TO STOP sign is removed/covered when work is suspended throughout a shift or completed for the day.

Typical Work Zone Traffic Control Site



Advance Warning Area: The area before the work zone where signs and devices should be placed to warn road users that work is taking place and that there will be workers on or near the roadway.

Taper Area: If a section of the road has been closed for works, the taper area is where the road is delineated and where traffic is diverted.

Safety buffer: Safety buffers are only required (but may be presented in other situations) for work zones where the approach speed is greater than 60km/h – instances where traffic controllers are not to be used.

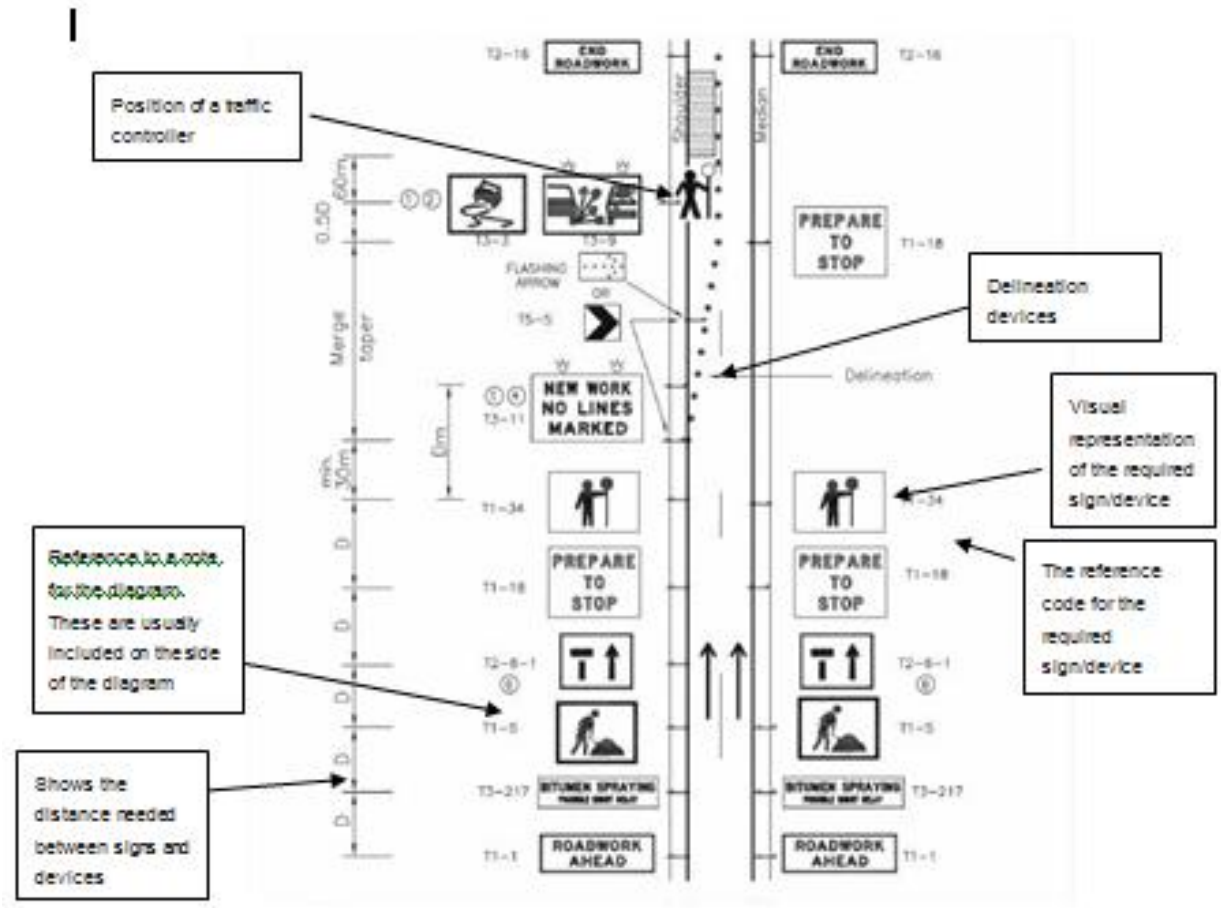
Work area: The area where the actual physical works are being carried out

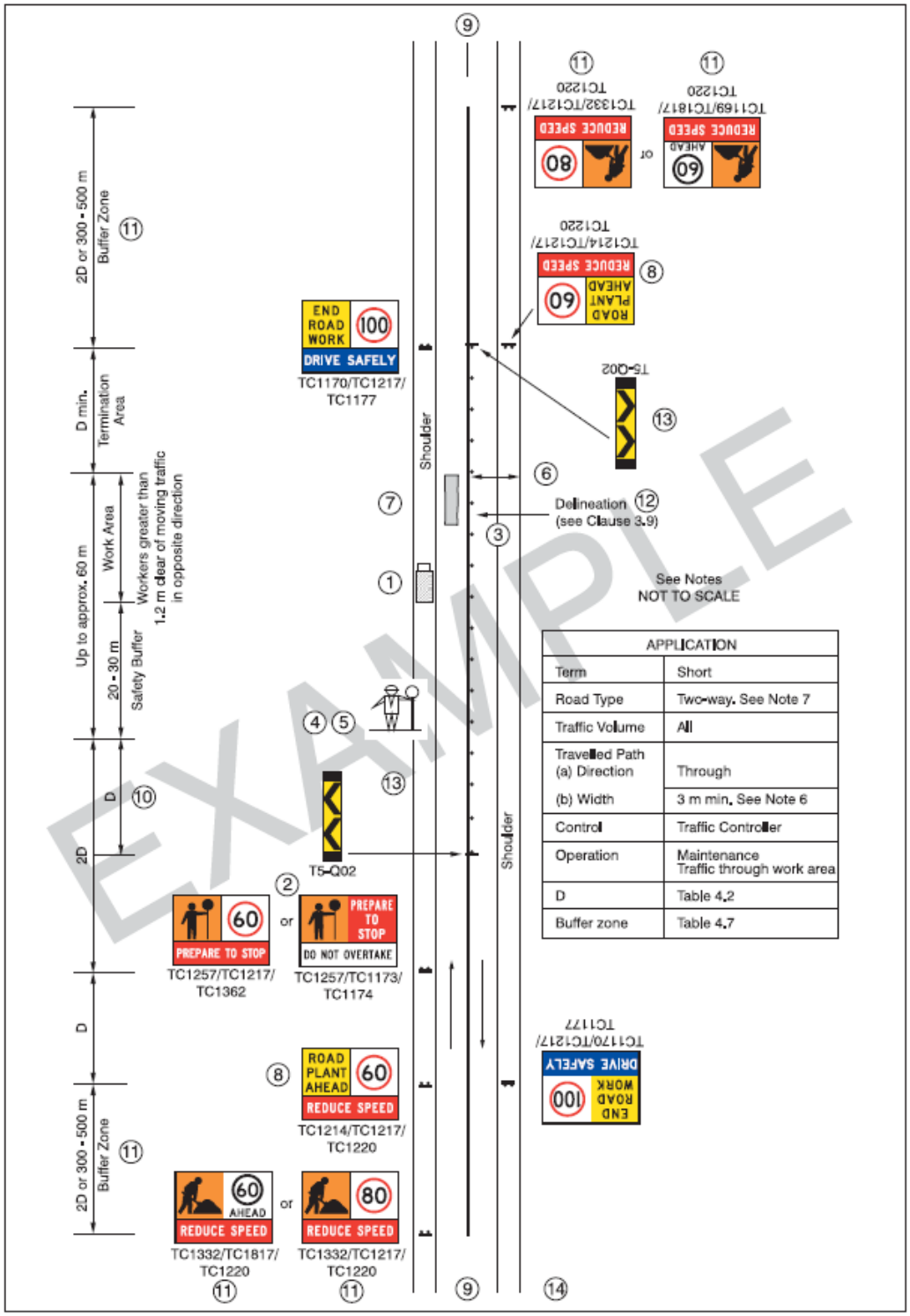
Termination area: Where the work zone ends and road users are transitioned back to normal traffic conditions.

Traffic Controllers have the authority to:

- Legally stop/slow traffic
- Use a stop/slow bat and hand signals to control traffic
- Report motorists who fail to follow reasonable directions to your supervisor or the police
- Controllers know what to do and when to do it

- Example of a Traffic Control Diagram (INSERT)




2D or 300 - 500 m Buffer Zone
D min. Termination Area
Up to approx. 60 m
Work Area
20 - 30 m Safety Buffer
Workers greater than 1.2 m clear of moving traffic in opposite direction
D
2D
D
2D or 300 - 500 m Buffer Zone
Shoulder
Shoulder
END ROAD WORK 100 DRIVE SAFELY
TC1170/TC1217/ TC1177
REDUCE SPEED 80
TC1332/TC1217/ TC1220
REDUCE SPEED AHEAD 60
TC1169/TC1817/ TC1220
ROAD PLANT AHEAD 60 REDUCE SPEED
TC1214/TC1217/ TC1220
T5-Q02
Delineation (see Clause 3.9)
See Notes
NOT TO SCALE
PREPARE TO STOP 60
TC1257/TC1217/ TC1362
or
PREPARE TO STOP DO NOT OVERTAKE
TC1257/TC1173/ TC1174
ROAD PLANT AHEAD 60 REDUCE SPEED
TC1214/TC1217/ TC1220
60 AHEAD REDUCE SPEED
TC1332/TC1817/ TC1220
or
80 REDUCE SPEED
TC1332/TC1217/ TC1220
END ROAD WORK 100 DRIVE SAFELY
TC1170/TC1217/ TC1177
APPLICATION
Term: Short
Road Type: Two-way. See Note 7
Traffic Volume: All
Travelled Path (a) Direction: Through
(b) Width: 3 m min. See Note 6
Control: Traffic Controller
Operation: Maintenance Traffic through work area
D: Table 4.2
Buffer zone: Table 4.7
EXAMPLE

1.3 Obtain, confirm, clarify and apply safety requirements

Under workplace health and safety legislation, all organisations and all workers have a responsibility to establish and maintain safe and healthy workplaces. This is especially important on road work sites.

How people are protected will depend on the distance of the work zone from the nearest edge of a lane carrying traffic. Traffic controllers however will likely be operating outside of the zone in which road works are taking place. Measures to protect traffic controllers could include:

- signs
- Flashing lights
- Tapers
- Temporary road work speed zones (to reduce the speed of the roadway to 60km/h or less)
- PPE, such as high visibility garments

Additionally, it is a requirement in most jurisdictions that works on roads is done in accordance with a Safe Work Method Statement (SWMS) or equivalent document.

Safe Work Method Statements (SWMS) are used by organisations to assist them in achieving the requirements as set out in WHS legislation.

SWMS are sometimes known as Standard Operating Procedures (SOPs). Or JSA's (Job Safety Analysis)

SWMS are statements that:

- describe how work is to be carried out
- identify the work activities assessed as having safety risks
- identify the safety risks
- describe the control measures that will be applied to the work activities
- include descriptions of the equipment used for work
- describe the standards and codes to be complied with
- outline the qualifications of personnel doing the work
- describe the training required to do the work

Personal Protective Equipment

There are requirements for Traffic Controllers to wear appropriate clothing and PPE to ensure their safety while conducting their specific duties.

High Visibility Clothing

Traffic Controllers are required to wear approved high visibility clothing (outer garments):

- at all worksites affected by traffic
- while outside a vehicle within the bounds of the road reserve

There are different types of approved high visibility clothing that Traffic Controllers must wear at the appropriate times.

Traffic Controllers must wear Approved Safety Clothing which may include:

For day time work:

- Approved High Visibility vest.
- Approved High Visibility shirt.

For night time work:

- High Visibility overalls with reflective tape

Because of the potential hazards associated with working on, or adjacent to, road worksites, all persons working on or authorised to enter such worksites, shall be supplied by their employer/Person Conducting Business or Undertaking (PCBU) with the relevant high visibility Personal Protective Equipment (PPE) and shall be instructed to wear it at all times when required.

This equipment and clothing should comprise of the following items (but may not be limited to):

- High visibility garments:
  - Fluorescent high visibility vest, shirt, jacket or overalls (day use only)
  - Retro-reflective outer garment (night use only)
- Safety footwear

Work Clothes

In order to protect the traffic controller from exposure to UV radiation, and to ensure that they are visible they should wear:

- broad brimmed hats
- broad brimmed safety attachments to safety helmet (if appropriate)
- long sleeved collared shirt
- long pants or overalls (especially when working near bitumen)
- tinted safety glasses (recommendation AS 1337.1: Safety Glasses and Spectacles)
- safety footwear
- broad spectrum SPF +30 sun screen and lip creams

Other requirements for personal protection equipment such as hearing protectors (earmuffs, ear plugs)

1.4 Identify, obtain and implement signage and devices

As a traffic controller, you are not permitted to implement a Traffic Control Plan/Traffic Guidance Scheme by setting out signs and devices, unless you are qualified to do so.

It will be useful however for you to develop a basic understanding of how signs and devices should be implemented and of the signs and devices that relate specifically to manual traffic control.

Traffic control signs and devices are used to warn and inform road users, and guide them safely around, past or through *Work Areas*. Signs and devices must be:

- In place before work begins
- Clearly visible to road users and not obscured by vegetation, parked vehicles, plant or other signs and devices
- Displayed in the correct sequence
- Removed on completion of the work

Who prepares TCP/TGS?

The MUTCD – Part 3 provides technical specifications and guidance for the setting out of temporary traffic control signs and devices used at road works.

It also provides standard diagrams for traffic guidance schemes across a range of work activities and worksites. Each state and territory has established a Manual or Code of Practice for traffic management based on and incorporating AS1742.3 – 2009

Existing signs and traffic control devices which are inappropriate for, or conflict with the temporary work site situation shall be covered, obliterated or removed.

Sample Signs

Sign/Device	Definition and Usage
	The PREPARE TO STOP sign shall be used to give advance warning where traffic may be required to stop in compliance with the directions of a traffic controller. The sign shall be used in conjunction with the Traffic Controller (symbolic) (T1-34) in this application.
	The TRAFFIC CONTROLLER (SYMBOLIC) sign shall be used to give advanced warning of the presence of a traffic controller. The PREPARE TO STOP sign shall be used in conjunction with this sign if traffic may be required to stop at the traffic controller position. The sign shall comprise a black symbol and border on a retro reflective fluorescent orange background.
	The STOP/SLOW BAT shall be used by a traffic controller to control traffic at any temporary obstruction or hazard. The bat should have a handle approximately 1.8m long to the underside of the sign. For night time operations, an illuminated wand may be used in conjunction with the bat

1.5 Select tools and equipment, check for serviceability and rectify or report any faults

In addition to the traffic signs and devices, various tools and equipment will need to be obtained to carry out tasks that are consistent with the requirements of the job.

Tools and equipment can include:

- High visibility vests.
- Radios.
- Notebooks and pens.
- Traffic Cones.
- Stop-slow bats.
- Signage.
- Barricades and barriers.
- Bollards.
- Warning lights and beacons.

A notebook and pen should be carried by yourself and all traffic controllers to record details of situations and observations such as:

- Traffic flow problems.
- Offending motorists.
- Suggestions for alteration/removal of signs and devices.
- Incidents and accidents.

Condition of Devices

Individual signs and devices should be examined before installation to ensure that they are in good condition and are effective. Signs and devices should not present any additional hazard to a road user by being present, and must not cause undue harm or damage to road users in the event that they are struck. Signs that do not meet the following standards should be cleaned, repaired or replaced:

- Mechanical condition: don't use items that are bent, broken or have surface damage.
- Cleanliness: free from dirt, road grime or contamination.
- Colour of fluorescent signs should not be faded or have lost their daylight impact.

1.6 Identify, confirm, clarify and apply environmental protection requirements

In addition to managing the risk of harm or loss to humans and equipment, you will need to ensure that any risks of damage to the environment from the work area are managed. Environmental protection requirements are part of every worksite. You must be familiar with the site *environmental management plans*, requirements and constraints, and apply these to all the tasks you carry out on the site.

Environmental protection requirements include:

- Waste/clean up management.
- Water quality protection.
- Noise and vibration control.
- Dust management.

ENVIRONMENTAL MANAGEMENT PLAN (EMP)

What is an EMP?

An EMP is a site or project specific plan developed to ensure that appropriate environmental management practices are followed during a projects construction and/or operation.

An effective EMP should ensure;

- Application of best practice environmental management to a project
- The implementation of a projects environmental impact assessment (EIA) including its conditions of approval or consent
- Compliance with environmental legislation
- Environmental risks associated with a project are properly managed

All personnel/workers must have a good understanding of the environmental management processes that must be used onsite.

If you have concerns, questions or queries about the exact requirements you must meet, you should speak with the environmental manager.

Where aspects of traffic management may have an environmental impact, procedures should be applied in accordance with the project environmental management plan to minimise any impact

Waste/Clean-Up Management

Waste management may include taking steps to use environmentally friendly materials (including recycled materials) and implementing methods of sorting waste into categories for recycling and correct disposal.

Water Quality Protection

Water quality protection measures may require runoff to be directed to areas where it will not escape into the stormwater system or other waterways.

This plan will detail items like silt fences, diversion drains and sediment ponds.

The water quality protection plan can have a sub-plan for any traffic diversions or detours planned

Dust Management

Dust control techniques may include:

- All vehicles transporting soil to/from the worksites will have their loads covered to minimise spillage and fugitive dust.
- Dust screens will be used as feasible.
- Water or a dust/erosion control agent applied as necessary by truck to unpaved surfaces used for trucking during dry weather conditions, with adequate frequency to limit the generation of dust from vehicle traffic.
- All stockpiles of soils designated for reuse will be placed on, and covered with, waterproof material until removed for placement elsewhere.
- All piles of soil and aggregate that could cause dust generation through wind erosion will be covered with a tarp or watered-down regularly.

The procedures to be followed on-site will be based on the requirements outlined in the environmental plans and specifications.

2. Control Traffic

2.1 Position or confirm temporary traffic signs and barriers

As mentioned earlier, you are not authorised to erect signs and devices on a work zone traffic control site unless you have completed the appropriate nationally-recognised training. It is useful however for you to understand how they should be positioned, especially since they are there to keep you safe.

Signs and devices should be positioned and erected so that:

- They are properly displayed and securely mounted,
- They are within the line of sight of the intended road user,
- They cannot be obscured from view by vegetation or parked vehicles,
- The do not obscure other devices from the intended road user,
- They are not a hazard to workers, pedestrians or vehicles,
- They do not direct traffic into an undesirable path,
- They do not restrict sight distance for drivers entering from side roads or streets, or private driveways; and
- They are not installed using supports that could be a hazard if struck by a vehicle.

As a traffic controller, you will most likely use 2 types of signs 'Stop/Slow' and 'Slow/Slow' these are hand held signs and is your primary piece of equipment to manage and control traffic.

Sequence of erection

Before work commences, signs and devices at approaches to the work site shall be erected in accordance with the adopted Traffic Control Guidance Scheme, in the following order

- advance warning and regulatory signs
- all intermediate advance warning and regulatory signs and devices required in advance of the taper or start of the work area
- all delineating devices required to form a taper including flashing arrow signs or temporary hazard markers where required
- delineation past the work area or into a side track
- all other warning signs or regulatory signs including termination and end of temporary speed zone signs.

Delineation devices such as cones and bollards shall be placed in the same sequence i.e those furthest in advance of the work place first

When erecting signs an devices

- Always travel in the direction of normal traffic flow
- A work vehicle with flashing arrow or rotating or flashing lights shall be positioned between the workers and approaching traffic during the placement of traffic control devices
- Worker shall not cross roads or carriageways on foot when erecting or removing signs

Signs and devices should be positioned and erected so that:

- They are placed in the specified position on the Traffic Guidance Scheme;
- They are properly displayed and securely mounted;
- They are within line of sight of the intended road user;
- They cannot be obscured from view (e.g. by vegetation or parked cars);
- They do not obscure other devices from the line of sight of the intended road user;
- They do not become a possible hazard to workers, pedestrians or vehicles;
- They do not deflect traffic into an undesirable path;
- They do not restrict sight distance for drivers entering from side roads or streets, or private driveways; and
- They are not installed using supports that could be a hazard if struck by a vehicle

Common signs that you may come across

		Notes
		Notes
		Notes
		Notes

2.2 Direct traffic correctly

Guidelines for Traffic Controllers

Traffic Controllers must consider what needs to be done to control traffic during:

- single lane operations
- stopping traffic for the duration of the job
- stopping traffic for a short time to allow machinery/trucks to move onto or across roads
- to warn and slow down traffic
- night controlling
- controlling traffic beyond the controller's line of vision

Traffic Controllers must follow established procedures, as it is the only way that everyone's safety on the site can be ensured in relation to traffic movement. It is through established procedures that Traffic Controllers know what to do and when to do it

- You wear the approved high visibility external clothing at all times.
- Ensure that PREPARE TO STOP and traffic controller symbolic signs are in place and located in accordance with the TCP.

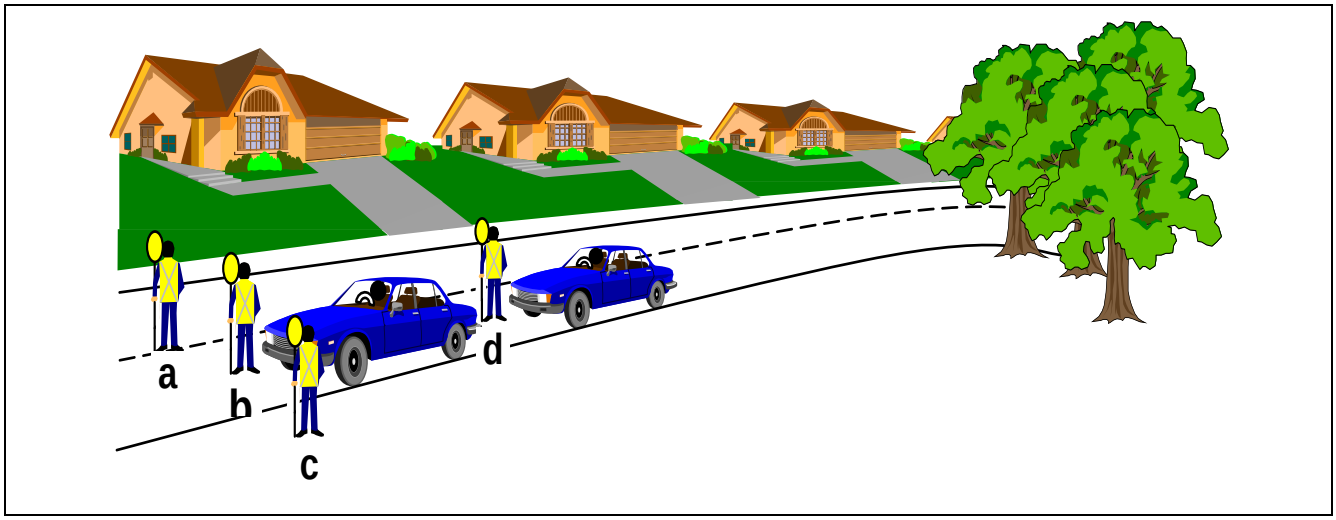
The Traffic Controller must consider the following factors when selecting a suitable location from which to control traffic.

They include:

- distance it takes for a vehicle to stop
- being able to face the on-coming traffic outside the path of the vehicles
- ensuring an escape route is available
- oncoming traffic being able to see the traffic controller from at least 90 metres away, when approach speed is 60km/h, or 60 metres, when approach speed is 40km/h.
- the position of the work area
- obstruction of the motorists vision by morning or evening sun
- restricted motorist's vision due to shadows on sunny days
- obstruction of motorist's view of any signs or other safety devices used in traffic control
- In order to maintain clear visibility with more traffic as it arrives, the traffic controller may have to change their location after stopping traffic. If required to do so they must:
- keep clear of traffic from the opposite direction, if required to move onto the roadway
- remain alone at the head of the traffic queue
- retain your escape route
- move to the edge of the travel lane or off the road before changing from 'STOP' to 'SLOW'

- All radios shall be confirmed to be in working order before going to the work site. Radios shall not be used at blasting works.
- Once the first vehicle has stopped, change position if necessary, in order to be clearly visible to following traffic. The traffic controller shall stay at the head of the traffic queue and stand alone, never permitting people to group around.
- Stand clear of traffic when allowing it to proceed.
- Not leave his or her post until directed by the Works Supervisor or Team Leader, or relieved by another Traffic Controller.
- Be courteous at all times in dealing with the public. If requested, inform the driver of the reason for, and possible length of the delay, but be brief. If provoked by unreasonable behaviour, exercise restraint. A few tips on communications for Traffic Controllers.
- Never get involved in arguments and avoid confrontations
- Never swear or use abusive language
- Try to anticipate situations before they occur
- Don't let your mind wander off the job
- Traffic controllers are a front line representative for organisations and should act professionally at all times when dealing with the public.
- Report irresponsible motorists immediately.

What is a suitable location?



Braking Distances

Traffic Controllers should always consider braking and stopping distances to allow motorists enough room to stop their vehicle.

Total stopping distances is made up by ADDING reaction distance and braking distances.

Reaction distance equates to the time taken when an object comes into view until braking commences. It includes the time taken to recognise the object plus the movement of the foot from the accelerator to the brake pedal.

Stopping distances will vary according to the situation. It increases significantly with a greater speed and stopping distances increase on downhill slopes, on wet roads and heavy vehicles.

Traffic Controllers shall:

Have a minimum visible distance of 90m between them and oncoming traffic, when approach speed is 60km/h, or 60m, when approach speed is 40km/h.

Ensure that the last vehicle in a queue is more than 150m from a crest or blind corner on roads

Slowing Traffic

Traffic Controllers are required to slow down traffic when the motorists need to be warned:

- about dangerous situations ahead
- that they are about to travel through or past a work area
- when travelling through a work area too fast
- about approaching the end of a queue that has built up around a bend or over the crest of a hill
- The Traffic Controller may also be required to stop traffic using the Stop/Slow bat. If this is required the correct procedure must be followed for stopping the traffic flow.

Stopping Traffic

The Traffic Controller must ensure that:

- wait for a suitable gap in the approaching traffic flow
- unless it is absolutely necessary, they must not attempt to stop large commercial or emergency vehicles (semi-trailers, buses, trucks, fire trucks or ambulances)
- select the vehicle that will be the last to proceed
- select the vehicle that will be the first to stop
- they wait for the last vehicle to pass then turn the bat to ‘STOP’ and using a positive hand signal, clearly indicate to the vehicle chosen that this vehicle is to stop
- the lead car can clearly see it is expected to stop and does not have to break suddenly before reaching the controller
- once the leading vehicle has stopped, that they adjust their position (if necessary) so that approaching vehicles can also see the controller’s bat
- they remain in front of the queue to prevent the lead vehicle from moving off prematurely

- if required to move onto the roadway, that the controller must be continually aware of (and keep clear of) traffic approaching from the opposite direction

Starting Traffic Procedure

The Traffic Controller must ensure that they:

- check that the other controller's bat is showing 'STOP' to their traffic
- check that the last vehicle coming through from the opposite direction has passed them
- check there is no machinery in the vehicle travel path or waiting to make a turn
- recheck that the other traffic controller's bat still shows 'STOP'
- move off the road to a safe position
- turn bat to slow and signal by hand for the traffic to proceed
- signal SLOW hand signals to motorists (as required)

Intermediate Traffic Controllers

The immediate work supervisor (leading hand) must make the decision if a intermediate traffic controller is required on the job. (in most cases this may also be known as a 'third' traffic controller)

For obstructed vision
An intermediate traffic controller is required if:

- the primary Traffic Controllers cannot see each other for long periods
- two-way radio signal is distorted or broken
- two-way radios are not available
- the job runs over the crest of a hill or around a curve in the road

The intermediate traffic controller is positioned so that they are able to see the controllers at each end of the work area. The intermediate traffic controller is positioned there simply to relay the messages from one controller to the other. The two end controllers still retain control over the flow of traffic.

When length of queue obstructs motorist's vision or traffic is approaching too fast

An end-of-queue traffic controller is required if:

1. queue approaches blind corners
2. queue approaches crest of a hill or curves around a bend
3. the length of queue causes sight distance problems for approaching vehicles
4. there are delays in the job
5. when accidents have occurred
6. during peak traffic times
7. traffic is approaching the end of queue too fast

The intermediate controller operates from the end of the queue showing 'STOP' to approaching vehicles when the queue is not moving. When the queue begins to move, the third controller changes their stop/slow bat to 'SLOW'.

The intermediate controller in some of these situations will signal a 'SLOW' hand sign to approaching vehicles. The two end controllers still retain control over the flow of traffic.

When there is a side street between the two Traffic Controllers

The intermediate controller is used in this situation simply to control the traffic movement in/out of the street. It is essential that in this situation all the controllers be in two-way communication so that traffic movement can be safely coordinated.

Important: It is necessary to place additional Traffic Controller (symbolic) and Prepare to Stop signs in advance of the 'Third Controller', if he/she is to stop traffic.

2.3 Control vehicles and pedestrian traffic and ensure safety

Safety and convenience of road users

In addition to providing adequate traffic control and guidance at a static work site the safety of road users will be enhanced by ensuring that the work site is managed in such a way as to cause the minimum amount of inconvenience to traffic movement.

Works should be arranged to minimise-

- disruption of established traffic movements and patterns;
- interference with traffic at peak movement periods;
- interference with public transport services; and
- the amount of road closed to traffic at any one time.

Provision for pedestrians and bicycles

Where pedestrians, including people with disabilities or visual impairment, have to move through, past or around a work site or to cross the road within a work site, they shall be provided with and directed to suitably constructed and protected temporary footpaths and crossing points, or formal pedestrian crossings, or refuges if warranted.

Pedestrian and bicycle paths should be provided on the same scale and to the same width as any facilities for pedestrian or bicycle traffic that were existing prior to the works.

2.4 Monitor traffic, make adjustments for changing conditions and position waiting vehicles for smooth traffic flow

Traffic Controller must monitor the work area, traffic flow & the weather conditions constantly throughout their duty period and make changes to the traffic flow when needed.

If Traffic Controllers believe that anything may increase the risk of an incident occurring they should alert their supervisor of the situation so that corrective action can be taken before an accident occurs.

- Traffic is approaching too fast
- Angle of the sun obstructs motorist's vision
- Peak hour traffic affects queue length
- When signs are poorly positioned, blown over, vandalised or too dirty or old
- Emergency vehicles are approaching under lights and siren

Weather Conditions:

Sun,

- The changing angle of the sun can shade the traffic control station
- Can make signs difficult to read
- May dazzle or blind drivers

Haze/dust

- Can make signs difficult to read
- May reduce the safe braking distance for traffic
- Drivers concentrating on the car ahead may not see the traffic control's signals.

Signs

- May be unreadable due to the changing angle of the sun/shade
- Blown over by wind or passing traffic
- Run over by work vehicles or traffic
- Vandalised, damaged or stolen
- Dirty

Traffic Volumes

- Peak periods affect the length of queues
- Proximity of other controlling devices such as traffic lights or level crossings will affect the flow of traffic through the work area.

Traffic Controlling at Night

Traffic Controllers may be required to control traffic at night when:

- traffic flow on the road during the day is too great
- an accident occurs late in the shift and the emergency services require assistance

Traffic Controllers must ensure that:

- appropriate night signs (with reflectors) are erected
- wands are used to signal motorists (if available)
- use a reflective stop/slow bat
- wear personal protective equipment

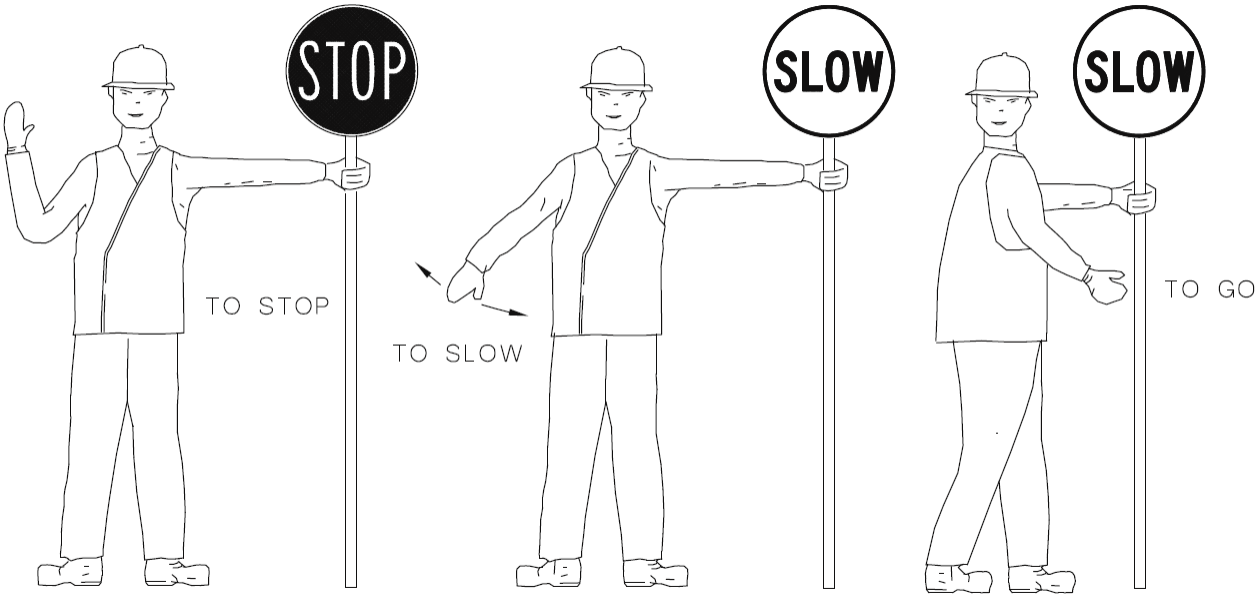
If you are required to work at night, what would you use to illuminate your control position?

- street lights
- portable lighting

2.5 & 2.6 Using hand held stop-slow bats and visibly clear and unobstructed hand signals

In order to communicate effectively with road users, giving clear and consistent signals are one of the most important functions of traffic control.

The STOP/SLOW bat shall be used by a traffic controller to control traffic at any temporary obstruction or hazard. Retro reflective material used on the STOP/SLOW bat shall be Class 1W material. The bat shall have a handle a minimum of 1.8 m long to the underside of the sign. For night-time operations, an illuminated wand should be used in conjunction with the bat.



- **Stop traffic** – turn the **STOP/SLOW** bat to **STOP** and raise the free arm into the stop signal position with the palm of the hand towards the traffic
- **Allow traffic to proceed** – check that all traffic from the other end of the work site has passed, then turn the **STOP/SLOW** bat to **SLOW** and with the other hand give the **GO** signal
- **Slow traffic** – show the **SLOW** side of the **STOP/SLOW** bat, extend the free arm and wave arm up and down.

2.7 Report traffic offenders

Incidents at worksites or road works

A traffic controller shall report incidents occurring at or within a worksite or road works to which they are stationed immediately to their supervisor.

Written reports shall be completed and submitted to their site supervisor at the conclusion of their shift or at the resumption of duty on the following day.

An incident is an occurrence that in the opinion of the traffic controller affects the safety and/or effectiveness of any persons at a worksite or at road works and may include:

- Road users disobeying a direction or signal given by a traffic controller when approaching a designated worksite.
- Drivers who fail to stop at a hand held stop sign.
- Accidents occurring within the designated worksite or road works.
- Dangerous practices of other road users within a worksite or at road works.
- Suggested improvements to operational procedures during adverse weather conditions.
- Difficulties experienced with stopping certain vehicle types (for example excess dimension vehicles).

A traffic controller may report to their supervisor, incidences of road users disobeying a direction or signal given by a traffic controller when approaching a designated worksite.

Incident reports may contain the following information:

- time, date and location of incident;
- type of incident (for example, a motorist fails to stop; accident; abusive/insulting/threatening language; assault; breach of these Approved Procedures by another person);
- incident identification, including:
    - vehicle type and colour
    - registration number including registered state or territory
    - direction of travel
    - description of driver/other road user and occupants
    - full and accurate description of the incident
    - witness details.

In an emergency situation, Traffic Controllers must:

- never leave their post (unless their own safety is threatened or a competent person takes over the job of traffic controlling)
- never risk their personal safety when trying to get a vehicle to stop
- secure traffic behind the incident to prevent additional collisions
- always warn co-workers, other Traffic Controllers and supervisor (if time permits) of the situation

3. Operate Communications Devices

To be effective in any workplace, we need to be able to communicate in appropriate ways

Effective communication

We can effectively communicate using various methods, systems and processes to achieve the outcome we need, consider the following and how we communicate:

- Equipment and systems
- Forms and paperwork
- Body language and facial expressions (non verbal)
- Type of language
- Tone and pitch
- Technical and non-technical
- SWMS
- Policies and procedures
- Signage

When speaking with colleagues and road users (face to face) we need to be polite, clear, effective and overall professional

You will be required to use communication equipment such as '2 way radios' you need to consider the following

- Space
- Distance
- Noise
- Language
- Sight
- Technical Speak
- Jargon
- Acronyms

Traffic controllers need to know the features of the Two-way radio they are using and how to communicate instructions clearly.

Common types of equipment used for communicating are 2 way UHF radios

2 Way radios have closed off frequencies (trunk) and public frequencies

They are quite integral to the successful completion of your duties

When using two-way radios Traffic Controllers should:

1. keep dialogue to a minimum
2. speak clearly
3. make accurate statements
4. provide enough information for the other controller to understand the situation
5. keep jargon to a minimum
6. Never get involved in arguments or confrontations.
7. Never swear or use abusive language.
8. Don’t engage in personal conversations.
9. Don’t make disparaging remarks about road users or members of the public or work colleagues.
10. Stay focused on the job

3.1 Adjust communication device controls for optimum reception/transmission results

When Two-Way Radios are required at a work site traffic controllers should become familiar with the radio equipment prior to the commencement of duties.

Traffic controllers should be aware of the following features of Two-Way Radios:

- On/Off switch
- CHANNEL control
- SQUELCH control (if fitted adjust until quiet)
- VOLUME control
- Microphone button
- Spare batteries or battery pack (Fully charged)
- Antenna
- Other relevant features

INSERT AN IMAGE OF A RADIO

If a change of radio channel is required due to interference or other reasons

- Nominate the new channel number you are switching to
- Count down to the change
- Make a check call with other traffic controllers or users
- If there is no response within 5-10 seconds all users should return to the previous channel.

3.2 Transmit messages clearly and concisely

Prior to commencing work discuss procedures such as “Call Signs” & other signals with all Traffic Controllers.

Procedures when using Two-Way Radios

- Depress the microphone button for 1-2 seconds prior to & after completing the message to prevent “clipping” (chopping of the beginning or ends of words) the message
- Restrict conversation to work related issues only
- Keep messages to a minimum
- Speak clearly and slowly
- Give accurate information
- Never swear or use abusive language, the public may be able to hear you.

Traffic Controllers should give a clear description of the last vehicle through the control point, Vehicle colour, make and model and if possible full registration to remove any confusion.

The use of a phonetic alphabet in communicating is quite common today, please see below an example

Alpha	November
Bravo	Oscar
Charlie	Papa
Delta	Quebec
Echo	Romeo
Foxtrot	Sierra
Golf	Tango
Hotel	Uniform
India	Victor
Juliet	Whiskey
Kilo	X-Ray
Lima	Yankee
Mike	Zulu

3.3 Maintain communication device power supply

Ensure that Two-Way radio batteries are fully charged at the commencement of duties

Ensure that you return the batteries to charge at the conclusion of the day's task.

If there has been a period of time where no transmissions have been received from the other traffic controller attempt to re-establish communications.

If a loss of battery power or radio failure is suspected the traffic controller's first priority should be safety, stop traffic flow if required until communications can be re-established.

Ensure that you monitor the battery charge indicator so that a low battery can be changed or charged prior to going completely flat.

3.4 Check communications contact after nominated period of non-contact

It is your responsibility to ensure communication is maintained and constant through the day/night traffic.

If you or other traffic controllers are not visible to each other, then ensure that you maintain a continuous communications connection.

A good practice is to have a schedule radio check between traffic controllers if there are long periods of non-activity or regular radio traffic

Regular calls between traffic controllers will confirm the operational capacity of the radio and will assist in identifying if there is an issue or fault.

4 Clean Up

4.1 Remove or cover signs and devices sequentially to provide warning to motorists during shutdown

As part of your role or responsibility, you may be required to assist with the clean up and assist with covering or removal of signs, check with your supervisor prior to ensure it is within your qualifiactions level

It is most important that the relevant signs and devices be removed or concealed from view as soon as any activity is completed or a hazard ceases to exist.

Removal of traffic control devices should be undertaken in the reverse order of erection, progresing from the work area out toward the approaches.

4.2 Clean, check, maintain and store tools and equipment

Condition of Devices

On completion of a traffic control operation signs and devices are removed.

- Count – Refer back to “Understanding TCPs” - look at the plan, list the devices and signs required.
- At the close of the operation:
    - Look again at the plan.
    - List the devices and signs that were required.
    - Note the number of devices which were used (e.g. cones).
    - Count what you’ve got.
- Check - the signs and devices for:
    - Damage
    - Dirt
- Communicate – i.e. report to the relevant person:
    - Loss or irreparable damage to devices or signs requiring replacement.
    - Damage to devices or signs requiring repair
- Complete – any required documentation:
    - Who is the relevant person in your organisation?
    - What is the reporting procedure – is there a form?

Before signs are returned and placed in storage for future use

Individual signs and devices should be examined when removed/returned to storage to ensure that they are in good condition and are ready for further use.

Dirty/dusty signs should be cleaned prior to being returned to storage.

Damaged signs should not be placed with the serviceable signs in storage. Damaged signs should be sent for repair if damage is minor or disposed of and replaced if the damage effects there intended use.

Additional Information

Log Books

The Traffic Controllers logbooks are a way of tracking you duties and may assist with achieving further qualifications, logbooks provide:

Evidence that the Traffic controller is following a safe system of work and has received the appropriate level of training for the work task.

Checklist for traffic controllers on a new site Risk Assessment for SWMS

Record of Traffic controller hours on duty

Portability of experience for Traffic controllers travelling interstate

The completed logbook can be used as evidence of industry experience when attending training for other Traffic Control qualifications

Fatigue management

It is important that you manage fatigue effectively

You may be out in the elements for long periods, in differing conditions

You will be required to be on your feet standing for long periods

- Carry water and food
- Wear comfortable footwear and appropriate clothing
- Always take breaks and adhere to task rotation

Rotation of Duties

An industry practice is to rotate assignments during the day

This assists with fatigue management

Dealing with the elements

And it assists in ensuring that staff takes essential breaks

PCBUs need to ensure that the physical welfare and safety of staff is managed

Always check your SWMS and policy and procedures

Manual Handling

At all times ensure that you follow appropriate manual handling practices and procedures when handling equipment and signage

Refer to your workplace WHS procedures and guidelines

Consider warming up and stretching prior to conducting any activity on the worksite

Summary

Working near traffic has been identified as high-risk construction work. In order to ensure the safety of Traffic Controllers, workers, pedestrians and the motorists it is important that Traffic Controllers:

- Be properly dressed
- Understand your authority
- Recognise the importance of correct procedures
- Be properly located
- Communicate effectively
- Assess changes in traffic patterns
- Know what to do in an emergency

It is only when all these requirements are followed by Traffic Controllers can the risks associated with the hazard of traffic controlling be effectively controlled/managed