Purpose
In a 2016 sample of crashes and near misses at road work sites, there were 17 occasions where a traffic controller (TC) or traffic management staff member was at risk of being hit by a vehicle. This fact sheet identifies key issues and suggests options for TCs and site supervisors to avoid the TC being struck by a vehicle.

These issues include:
1. TC cannot be seen from a distance
2. TC has no clear escape path
3. TC is hard to see because of glare
4. Route through site is not clear for drivers
5. Drivers believe speed limit is unreasonable
6. Traffic queues extend past length of taper
7. Drivers cannot see site because of hill or crest
8. Site operates at high alcohol/fatigue times
9. TC is distracted
10. Drivers are frustrated about delays
11. Drivers disobeying speed limits

(Access any of the above topics to navigate to that page.)

Audience
- People who prepare and administer roadwork contract documents
- Traffic management companies
- Traffic management design professionals
- Contractors (PCBU)

Training and responsibilities
The first step for all site supervisors is to make sure that your TCs hold current accreditation and have had the appropriate training for the job that they will be working on.

It is your responsibility to make sure your TCs are alert and medically fit, and are not fatigued or affected by alcohol or drugs.

Include your TCs in your pre-start meeting to discuss job expectations and any site-specific issues.

Research findings and examples

In 41% of cases the driver ignored TC instructions and failed to stop.

Example 1: A car drove towards the TC who was holding the STOP bat. The car failed to stop and the TC had to take evasive action to avoid being hit. When the vehicle eventually did stop the driver verbally abused the TC. (Downer, 2016)

Example 2: A member of the public ignored the road closure sign and came through the site on the wrong side of the road. TCs told him the road was closed but the driver said he had to find a way through somehow, and proceeded to drive down the closed road. (Downer, 2016)

Example 3: A motorcyclist ignored the STOP bat and tried to travel through the road work site on the footpath. The TC instructed him to stop and directed him to the correct path. The motorcyclist then drove straight at the TC, making contact with him and abusing him as he continued through the site. (Altus, 2016)

In 17% of cases the vehicle was speeding through the site or past the control point.

In three cases the threat to the TC was deliberate.
Issue: The TC cannot be seen from a distance because of the site layout or road geometry, or because signs are in the way.

What do you see?

- Rear end crashes and near misses as drivers brake too late.
- Drivers are overshooting the stop point and you hear squealing of brakes.

What can you do?

TCs:
- Tell the site supervisor if you do not have good visibility of the traffic or you think drivers cannot see you properly.

Site supervisors:
- Drive through the site to see if drivers have good visibility of the TC.
- Stop traffic control if visibility is poor.

Speak to your Traffic Management Designer about:
- Moving the TC to a more conspicuous position.
- Moving any signs or screens that are blocking the view of the TC.
- Installing portable traffic lights instead of a TC.
- Installing flashing lights on TC warning signs.

Issue: The TC does not have a clear and easy to use

What do you see?

- The TC is surrounded by signs, bollards or guardrail.
- The TC is operating next to a batter or building.

What can you do?

TCs:
- Tell the site supervisor that a clear escape path has not been provided.

Site supervisors:
- Move any obstacles blocking the escape path for the TC.
- Stand down the TC until a clear escape path can be provided.

Speak to your Traffic Management Designer about:
- Moving the TC to a position where a clear escape path is available.

In practice...

Sometimes the TC can’t be moved to a safer location. An example of this is at works on mountain roads beside an embankment or cutting. In these cases an additional TC could be installed at a safe location on the approach to the site, to slow traffic as much as possible before it reaches the TC located at the roadwork site.
### Issue: The TC is hard to see because of glare from the lighting conditions.

<table>
<thead>
<tr>
<th>What do you see?</th>
<th>What can you do?</th>
</tr>
</thead>
</table>
| • Drivers squinting and holding their hands up to shield their eyes.  
• Last minute braking and overshooting the stop point. | **TCs:**  
• Tell the site supervisor that you think drivers cannot see you because of glare.  
**Site supervisors:**  
• Do not schedule TC operations at dawn or dusk on east-west running roads when the sun is directly in front of or behind the TC.  
• Use LED lights on the STOP bat in fog and rain conditions.  
• During night works look at the position of lights in relation to the TC. Make sure roadwork lighting, VMS and flashing lights do not produce glare that makes it harder to see the TC.  
• **Talk to your Traffic Management Designer about moving lights that cause glare.** |

### Issue: The route through the traffic control site is not clear to the driver.

<table>
<thead>
<tr>
<th>What do you see?</th>
<th>What can you do?</th>
</tr>
</thead>
</table>
| • Drivers are going the wrong way around barriers, bollards and delineation.  
• Drivers are stopping at the wrong place.  
• Drivers are entering closed lanes.  
• Vehicles are swerving through the site. | **TCs:**  
• Tell the site supervisor if motorists seem to be confused about the route through the site.  
**Site supervisors:**  
• Drive through the site to see if the route through seems clear. Follow other vehicles to see how they react to the signs and delineation.  
• Speak to your Traffic Management Designer about:  
  • Installing extra delineation to make the route through the site clearer for motorists.  
  • Using retro reflective delineation and flashing lights in wet and foggy weather.  
  • Using cones, bollards and barriers to stop movements like entering closed lanes and overtaking queued traffic.  
  • Using a temporary hazard marker (chevron) showing how to proceed through the site (T5-Q02).  
  • Installing four traffic cones along the centreline showing drivers how to approach the stop point (Clause 4.10.2 of the Manual of Uniform Traffic Control Devices (MUTCD), Part 3).  
  • Installing a “Stop here when directed” (T1-Q12) sign so drivers know where they need to stop. |

**Did you know...**

There is a new temporary hazard marker which gives clearer directions to drivers than previous versions. The new sign was developed in partnership with the traffic management industry.
Issue: Drivers are not slowing down because the speed limit does not seem reasonable to them.

What do you see?

- Drivers are speeding through the site.
- Drivers do not obey the STOP/SLOW bat.
- Drivers overshoot the stopping point.
- There are rear end crashes and near misses at the end of the traffic queue.
- You hear squealing tyres as drivers try to brake in time.

What can you do?

**TCs:**
- Tell the site supervisor that drivers are not slowing down enough to stop safely.

**Site supervisors:**
- Drive through the site with traffic to see if the reduced speed limit starts too far ahead of the road work site so that motorists start to speed up again.

**Talk to your Traffic Management Designer about:**
- Reducing lane width with delineators or temporary curbing so motorists “feel” like they are going too fast.
- Using rumble strips and rumble mats to alert drivers to the lower speed limit.
- Installing portable speed humps to encourage drivers to slow down.
- Using portable speed display devices to let motorists know that they are speeding.

Did you know...

Heavy vehicles need more stopping distance than cars do.
Your TC needs to think of this when they are stopping traffic. Give heavy vehicles enough time to react and stop safely.

<table>
<thead>
<tr>
<th>Vehicle Speed</th>
<th>Stopping Distance in metres</th>
</tr>
</thead>
<tbody>
<tr>
<td>100km/h</td>
<td>160</td>
</tr>
<tr>
<td>90km/h</td>
<td>145</td>
</tr>
<tr>
<td>80km/h</td>
<td>130</td>
</tr>
<tr>
<td>70km/h</td>
<td>115</td>
</tr>
<tr>
<td>60km/h</td>
<td>100</td>
</tr>
</tbody>
</table>

- Truck
- Car

Traffic Controller near misses, Transport and Main Roads
Issue: Traffic starts to queue so the speed taper is no longer long enough for drivers to react and slow down

**What do you see?**
- There are rear end crashes and near misses at the end of the traffic queue.
- You hear squealing tyres as drivers try to brake in time.
- Queues getting longer.

**What can you do?**

**TCs:**
- Tell the site supervisor that drivers are not slowing down enough to stop safely.

**Site supervisors:**
- Shut down the site until traffic is less busy.

**Talk to your Traffic Management Designer about:**
- Identifying and marking the point beyond which queuing traffic will need the speed taper to be moved.
- Moving the speed taper to accommodate the length of the extended traffic queue.

**In practice...**

If you move the speed taper to allow for queuing traffic, make sure that you return it to the original position as soon as possible. If the speed taper is too long drivers will start speeding up again before they reach the TC.

Issue: Drivers are not slowing down because the site is at the bottom of a hill or near a crest.

**What do you see?**
- Drivers overshoot the stopping point.
- There are rear end crashes and near misses at the end of the traffic queue.
- You hear squealing tyres as drivers try to brake in time.

**What can you do?**

**TCs:**
- Tell the site supervisor that drivers are not slowing down enough to stop safely.

**Site supervisors:**
- Check to make sure the number and location of road work warning signs meets guidelines.

**Talk to your Traffic Management Designer about:**
- Installing flashing lights on road work and TC warning signs to attract motorists’ attention.
- Using a variable message sign to let drivers know about the location of the road work site.
**Issue: The site operates at high alcohol or fatigue times.**

### What do you see?
- Drivers making aggressive gestures and abusing the TC.
- Vehicles overtaking around traffic queues.
- Vehicles driving into closed lanes.
- Motorists ignoring TC instructions.
- Drivers following too closely and speeding to get past the TC before the STOP bat is displayed.

### What can you do?

**TCs:**
- Tell the site supervisor that motorists seem to be tired or affected by alcohol.
- Be aware that tired or alcohol-affected drivers are unpredictable. You will need to remain alert. Make sure you take a rest break every 2 hours.

**Site supervisors:**
- Tell TCs to be alert and vigilant at high alcohol or fatigue times.
- Provide TCs with clothing that has retro reflective biometric bands.
- Consider changing the work schedule to a less risky time of day.
- Talk to the Queensland Police Service about enforcement options.

Talk to your Traffic Management Designer about:
- Using cones and barriers to make the route through the site more obvious for tired or alcohol affected drivers.
- Installing rumble strips or rumble pads to make tired drivers more alert.

### Did you know...
- Most alcohol related crashes happen between 9pm and 6am.
- Most fatigue related crashes occur from 2-6am, and 2-4pm.

---

**Issue: The TC is distracted and not paying attention to the traffic.**

### What do you see?
- The TC making poor decisions when directing traffic.
  - You might see them:
    - leaving it too long to release queued traffic
    - releasing traffic before approval is given
    - giving the wrong signals to drivers, or
    - standing too close to traffic so they are at risk of being hit.
- You may also hear the squealing of brakes or tyres, or the TC being abused by drivers.

### What can you do?

**TCs:**
- Take a rest break every 2 hours to stay alert.
- Operate according to the TC guidelines (TC Accreditation Scheme Approved Procedure).
- Be respectful and considerate of drivers when controlling traffic.

**Site supervisors:**
- Make sure the TC is taking a break every 2 hours.
- Remind the TC of their operating requirements.
- Remove the TC from the task if they cannot maintain alertness.
Issue: Drivers are frustrated about delays.

What do you see?

- Drivers are illegally overtaking traffic at the end of the queue and weaving dangerously around traffic through the site.
- You hear engines revving and drivers are abusing you.
- Drivers take off quickly when released, spinning tyres.

What can you do?

TCs:

- Tell the site supervisor that you think drivers are behaving dangerously because they are frustrated by the delay.

Site supervisors:

- Make sure your TC is being respectful and considerate when directing traffic.
- Report abuse by drivers using the Road Worker Safety Hotline on 1800 501 509.

Talk to your Traffic Management Designer about:

- Installing warning signs to advise drivers of delays.
- Signs which state the likely waiting period are available.

Issue: Drivers are not obeying speed limits because they do not think they will be caught speeding.

What do you see?

- Drivers exceeding the speed limit through the road work site.
- Drivers unable to slow down and stop in time when directed.
- Drivers overshooting the stop point at the TC or portable traffic light.
- Rear end crashes or near misses at the end of the traffic queue.
- Illegal overtaking of vehicles that are obeying the roadwork speed limit.
- You may also hear drivers revving engines, squealing tires and abusing TCs as they pass.

What can you do?

TCs:

- Tell the site supervisor that drivers are not slowing down enough to stop safely.

Site supervisors:

- Speak to the Queensland Police Service about options for speed enforcement at the site.

Talk to your Traffic Management Designer about:

- Using portable speed display devices to let motorists know that they are speeding.

Did you know...

Portable speed display devices have been shown to reduce vehicle speed at the point where they are installed, and for a distance down the road.
Where to go for advice

Manual of Uniform Traffic Control Devices (MUTCD)

The MUTCD Part 3 – Works on Roads contains guidelines for traffic management. You can find it by typing “MUTCD” into the search bar on the Transport and Main Roads website (www.tmr.qld.gov.au).

Variations to the optimal treatments should only be made on the basis of a documented risk assessment.

MRTS02 - Provision for Traffic

The MRTS02 - Provision for Traffic is the TMR technical specification that applies to the control of traffic during roadworks and describes the project-specific requirements for control of traffic through the worksite. You can find it by typing “MRTS02” into the search bar on the Transport and Main Roads website (www.tmr.qld.gov.au).

This specification makes provision for mandating extra requirements for preventing incidents and crashes involving TCs.

TC training

Up-to-date training in safe traffic control practices can help protect TCs from near misses and crashes on the job site.

To operate in Queensland TCs must successfully complete a Queensland Department of Transport and Main Roads approved TC training course that provides both classroom and supervised on-road training in safe operation of STOP/SLOW traffic control activities.

The TC training course is offered by a range of Registered Training organisations. It includes a number of national units of competency. Further information about the TC training course can be obtained by contacting Statewide Capability Development, Department of Transport and Main Roads on 07 3066 8672.

The TC Accreditation Scheme Approved Procedure can be downloaded from the Department of Transport and Main Roads website (www.tmr.qld.gov.au) by typing “TCASAP” into the search bar.

Other fact sheets in the series include:

- Entering closed lanes at road works
- Rear end crashes at road works
- Disobeying the traffic controller

For more information please email trafficengineering.support@tmr.qld.gov.au