

7.1 Responsibilities of drivers

Drivers of vehicles at work sites are responsible for driving safely and in accordance with the road rules, exercising care and working in accordance with Vehicle Movement Plans (VMPs) where they are provided.

Special driving care is necessary when entering and leaving traffic streams and turning at work sites. This is even more important for loaded trucks because, compared with lighter vehicles, longer time and distance is needed to accelerate and decelerate.

All trucks used on work sites shall have fitted and maintained both reversing alarms and reversing lights. Procedures shall be put into place to warn all workers of the potential hazard of reversing vehicles and to establish appropriate on site traffic control procedures. Such procedures could include the requirement for truck drivers to report to a suitably signposted area on the work site and for a designated worker to walk beside the reversing truck to act as an observer to ensure all workers are clear of the reversing vehicle. (See Section 9.23, *Working on foot near plant*).

Contractors and agents to the RTA are strongly encouraged to adopt the principles contained in the RTA's *Safe Driving Policy*, as contained in the RTA's Occupational Health and Safety Manual.

7.2 Site entry and exit

When entering or leaving work areas trucks shall be able to decelerate and accelerate outside the through traffic lanes, i.e. under traffic control or on shoulder areas. Under motorway conditions deceleration and acceleration lanes shall be provided. Under all other conditions if the sight distance is less than 500 m, then deceleration and acceleration lanes shall be considered or the entry and exit points relocated.

7.3 Hazardous movements

U–turns – single movement U–turns are not to be made across lanes carrying traffic, without traffic control by Traffic Controllers or traffic signals, unless clear sight distance in both directions exceeds 2D (6D for 3–point U–turns). U–turns on divided roads from one carriageway to the other are to be made only at established median crossovers (see Section 7.8, *Median crossovers*) or in accordance with an approved TCP or VMP. Note, U–turns are illegal across unbroken centrelines (barrier line or painted median).

Reversing movements – there is to be no reversing, including 3–point U–turns, in lanes carrying traffic unless traffic is being controlled by Traffic Controllers or traffic signals, or approach sight distance exceeds 6D (20 seconds of travel time). Vehicles reversing in the work area are subject to the conditions outlined in Section 7.1, *Responsibilities of drivers*.

Stopping – work vehicles shall not remain stationary in lanes carrying through traffic unless broken down, in a traffic queue, or protected by Traffic Controllers or traffic signals.

7.4 Planning for movements of work vehicles

When planning works, attention shall be given to ensure that traffic associated with the works can safely manoeuvre to and from traffic streams, turn at work areas, depots, stockpile sites, quarries, gravel pits, etc and turn around. This includes:-

- trucks delivering materials or equipment
- trucks taking materials or equipment from the work area and associated depots, storage areas, gravel pits, etc
- gang trucks
- works supervisors' vehicles, etc.

The standard TCPs in this manual show arrangements necessary to ensure that the general public can travel safely around, past or through work sites.

It is also essential that satisfactory arrangements are planned and implemented for vehicles associated with works. This mainly involves entering and leaving the traffic stream at work areas, accesses and side roads, or turning around.

Locations for turning across lanes carrying traffic and for entry and exit to and from work areas for vehicles associated with the work shall be restricted to well defined points selected after considering relevant factors including sight distance, grades, volumes and approach speeds of through traffic, areas clear of traffic lanes for accelerating and decelerating, etc.

7.5 Vehicle movement plans

On roads with approach speeds of 100 km/h or more work vehicles should normally enter and leave the through traffic stream using the same ramps or side roads as the travelling public. Where this cannot be reasonably achieved, refer to Tables 7.1 and 7.2 to determine the type of treatment to be adopted, based on ADT, truck movements per shift and sight distance.

On roads with approach speeds of less than 100 km/h but more than 80 km/h refer to Tables 7.3 and 7.4 to determine the type of treatment to be adopted and for approach speeds between 80 km/h and 60 km/h inclusive refer to Tables 7.5 and 7.6.

For a particular work site, more than one VMP may be necessary to reflect changes in preferred routes as the work progresses.

ADT	300 – 1,500		More than 1,500	
	≤20	>20	≤20	>20
Number of truck movements per shift				
TCP with Traffic Controllers or traffic signals		Yes ^α	Yes ^α	Yes ^α
VMP required	Yes ^α	Yes ^α	Yes ^α	Yes ^α
Warning signs required during shifts (TCP 195)		Yes ^α		Yes ^α

Table 7.1 Providing for truck movements where approach speed is 100 km/h or more and sight distance is LESS than 2D

^α Under these conditions every effort should be made to choose turning locations where sight distance exceeds 2D.

ADT	300 – 1,500		More than 1,500	
	≤ 20	>20	≤ 20	>20
Number of truck movements per shift	≤ 20	>20	≤ 20	>20
TCP with Traffic Controllers or traffic signals		Yes	Yes	If acceleration and deceleration cannot occur on shoulders
VMP required		Yes		Yes
Warning signs required during shifts (TCP 195)		If sight distance is less than 6D		If sight distance is less than 6D

Table 7.2 Providing for truck movements where approach speed is 100 km/h or more and sight distance is MORE than 2D

ADT	300 – 1,500		More than 1,500	
	≤ 20	>20	≤ 20	>20
Number of truck movements per shift	≤ 20	>20	≤ 20	>20
TCP with Traffic Controllers or traffic signals		Yes	Yes	Yes
VMP required	Yes	Yes	Yes	Yes
Warning signs required during shifts (TCP 195)		Yes		Yes

Table 7.3 Providing for truck movements where approach speed is less than 100 km/h but more than 80 km/h and sight distance is LESS than 2D in built-up areas

ADT	300 – 1,500		More than 1,500	
	≤ 20	>20	≤ 20	>20
Number of truck movements per shift				
TCP with Traffic Controllers or traffic signals		Yes		Yes
VMP required		Yes		Yes
Warning signs required during shifts (TCP 195)		If sight distance is less than 6D		If sight distance is less than 6D

Table 7.4 Providing for truck movements where approach speed is less than 100 km/h but more than 80 km/h and sight distance is MORE than 2D including built-up areas

ADT	300 – 1,500		More than 1,500	
	≤ 20	>20	≤ 20	>20
Number of truck movements per shift				
TCP with Traffic Controllers or traffic signals		Yes	Yes	Yes
VMP required		Yes		Yes
Warning signs required during shifts (TCP 195)		Yes		Yes

Table 7.5 Providing for truck movements where approach speed is between 60 km/h and 80 km/h and sight distance is LESS than 2D including built-up areas

ADT	300 – 1,500		More than 1,500	
	≤ 20	>20	≤ 20	>20
Number of truck movements per shift				
TCP with Traffic Controllers or traffic signals		Yes		Yes
VMP required		Yes		Yes
Warning signs required during shifts (TCP 195)		Yes		Yes

Table 7.6 Providing for truck movements where approach speed is between 60 km/h and 80 km/h and sight distance is MORE than 2D including built-up areas

In any instance where the use of Tables 7.1 to 7.6 indicates that a traffic controller or portable traffic signals shall be used then the approach speed of traffic is to be reduced to at least 60 km/h.

7.6 Responsibilities

The **project manager** is responsible for:-

- ensuring that satisfactory arrangements are planned and implemented for vehicles associated with works
- considering the need for VMPs at work sites and truck turning areas as indicated by Tables 7.1 to 7.6 or other extenuating circumstances
- where a VMP is required, approving it and making it available before work begins.

The **works supervisor** is responsible for:-

- planning arrangements for vehicles associated with works, and
- where a written VMP is required by Tables 7.1 to 7.6, or as specified by the project manager, confirming that the VMP is relevant for the work and the site.



The **team leader** is responsible for:

- ensuring that drivers of work vehicles are familiar with arrangements for traffic control, and
- ensuring that RTA's *Safe Driving Policy*, Section 7.1, *Responsibilities of drivers*, Section 7.2, *Site entry and exit* and Section 7.3, *Hazardous movements* are available to drivers
- instructing drivers how to enter and exit work sites safely and the routes to follow between work sites and depots, material sources etc
- implementing written VMPs where they are provided.

7.7 Signs for depots, stockpiles, quarries, gravel pits, etc (AS 3.16.2)

Where roadworks generate truck turning movements remote from work sites, temporary warning signs are to be considered at the approaches to the points of access on through roads. This is particularly important where there may be little or no other indication of likely vehicle turning movements, i.e. at roadside stockpile sites or accesses to private property.

The appropriate signs are trucks (W5-22, long term) or (T2-25, short term). These signs may be used in conjunction with **TRUCKS TURNING** (W5-205) and **xx m ON LEFT/RIGHT** (W8-207 (L) or (R) signs. A typical arrangement is shown in TCP 195. All signs shall be displayed before the haulage operation begins, and removed or covered at the end of each shift.

7.8 Median crossovers

The main purpose of median crossovers on Freeways and similar high speed divided roads is to allow access for emergency vehicles (i.e. Police Service, Ambulance Service and Fire Brigade) and roadworks vehicles. Other drivers on these roads are mostly unaware of median crossovers and do not expect to encounter turning traffic.

Emergency vehicles are generally more recognisable than roadworks vehicles. Drivers respond more defensively in the vicinity of emergency vehicles than roadworks vehicles.

The location of vehicle crossovers is therefore critical. In planning works on Freeways and other high speed roads, it is necessary to check median crossovers likely to be used by works vehicles.

The relevant requirements are:-

- the desirable minimum sight distance to a median crossover is 1km
- the absolute minimum sight distance to a median crossover is 500m
- median crossovers should be located well clear of entry and exit ramps to ensure short weaving manoeuvres do not occur
- motorists shall not be required to stop or slow or swerve for roadworks vehicles using the crossovers
- having regard to the point above, at each crossover determine whether roadworks vehicles are to join the fast lane and accelerate or to cross the carriageway to the slow lane and accelerate.

Where these requirements cannot be met, either provide for turning movements at a different location, or use a TCP to close one or more lanes so that deceleration, turning and acceleration takes place outside the traffic stream.

See Section 7.7, *Signs for depots, stockpiles, quarries, gravel pits, etc* to determine the need for signs.

7.9 Haul roads crossing public roads

Special care is necessary in designing traffic control where haul roads cross public roads. Traffic control may take the form either of Traffic Controllers, **STOP** (R1-1) signs or traffic signals depending upon sight distances and traffic volume.

Traffic signals at haul road crossings may be:-

- temporary, i.e. fixed signals designed in accordance with current RTA specifications, or
- portable (with one or two sets), in accordance with Section 10 of this manual.

A typical arrangement using traffic signals is shown in TCP 44.

Care shall also be taken when vehicles are leaving work areas to ensure that gravel or mud is not deposited on the through road. If conditions on the work area are such that this might happen then consideration shall be given to the use of rumble grids and coarse gravel layers or hosing clean the vehicles before they enter or cross the through road.