

## **Resident's Toolkit – Traffic Control Device Local Area Traffic Management**

This booklet contains information on traffic control devices commonly used in South Australia.

A traffic control device is a sign, signal, marking, structure or other device, to direct or warn traffic on, entering or leaving a road.

Each device is designed to achieve particular desired outcomes and therefore should be applied appropriately considering the traffic issues and local conditions. The devices, if used appropriately, can achieve desired outcomes for traffic speed, traffic volumes and road safety. Apart from the costs involved, the traffic devices have specific limitations which is an important consideration in the decision making process.

The information in this toolkit is not an exhaustive list of the traffic control devices that are available. However, it is a resource for local residents and a good starting point for community involvement in the development of Local Area Traffic Management Plans.

The use and installation of the traffic control devices are governed by the 'Manual of Legal Responsibilities and Technical Requirements for Traffic Control Devices' and relevant Australian Standards.

I invite you to consider the information presented in this brochure, and participate in the Local Area Traffic Management Plan for your area.

If you require further information, you can contact us on 8372 5111 or email [pobox1@unley.sa.gov.au](mailto:pobox1@unley.sa.gov.au)

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## Regulatory controls

Regulatory controls involve the use of signs to indicate a restricted movement. These measures are not self-enforcing and rely to a certain extent on the level of enforcement which takes place in the area concerned.

### 1. 'One-way' street signs

One-way operation can be used for narrow streets where stationary vehicles often restrict the available carriageway. One-way streets can be introduced in residential areas to discourage through traffic or to assist with the consolidation of on-street parking.



#### *Advantages*

- The number of conflict points is reduced
- More even traffic flow if applied in conjunction with other surrounding streets.
- Double-parked vehicles cause less delay.
- Parking manoeuvres tend to be less dangerous and cause less obstruction.
- A fully protected pedestrian crossing can be provided on at least one leg of an intersection.
- Accident numbers may be reduced.
- Inexpensive treatment.

#### *Disadvantages*

- Trip length for local traffic could be increased.
- Large volumes of traffic may be re-routed through residential streets.
- Potentially higher vehicle speeds.
- Strangers to the area may cause delays to other traffic as they attempt to find their way.
- Pedestrians may step off the kerb looking the wrong way.
- Additional signs and road markings are needed.

Example locations: Nairne Terrace, Goodwood and Richards Terrace, Goodwood.

### 2. Giveway signs

The sign is erected at an intersection to control vehicle movement priority. Traffic on the sign posted approach must give way to other traffic in accordance with the Australian Road Rules.



#### *Advantages*

- The Give Way sign is easily recognisable and clearly denotes priority.
- Vehicle delay on minor approaches is minimised if the traffic on cross roads is light.
- Improves safety by slowing down the traffic on minor approaches.
- Give Way signs are often more effective when installed in conjunction with narrowed intersections or with central islands.
- Inexpensive treatment.

#### *Disadvantages*

- Vehicles on the minor approaches may have to wait for long periods if traffic on the major cross-roads is high.
- Does not improve safety of the pedestrians at the intersection
- It is not a speed attenuating device

Example locations: Laught Avenue/East Avenue intersection, Black Forest.

### 3. Stop signs

The sign is erected at an intersection to control vehicle movement priority and to improve safety by stopping traffic on the minor approaches. Traffic on the minor approaches must stop and give way in accordance with the Australian Road Rules.



#### *Advantages*

- The sign is easily recognisable and clearly allocates priority.
- Vehicle delay is minimal if cross traffic is light.

- Good control of priority by demanding an actual stop of minor traffic.
- Inexpensive treatment.

#### *Disadvantages*

- Stopping at Stop signs is mandatory. Therefore, the delay to vehicles is generally greater than that at Give Way signs.
- Delays to vehicles on minor approaches can be substantial when the volumes on major approaches are high.
- Overuse of signs could lead to motorists ignoring the restrictions.

Example locations: Forest Avenue/ East Avenue intersection, Black Forest.

#### **4. Turn Bans**

Turn bans can be No Right Turn or No Left Turn and can be accompanied by time restriction (e.g. 4-6 pm and/or 7-9 pm)



#### *Advantages*

- Increases capacity and reduces delays at an intersection where the turns are prohibited.
- Turn Bans can be made self-enforcing by median closures and restrictive channelisation.

#### *Disadvantages*

- Drivers whose desired manoeuvre is banned are disadvantaged. They would have to perform a compensating manoeuvre elsewhere and possibly incur an increase in travel distance.
- Indiscriminate installation of turn prohibitions can cause drivers to ignore bans or cause confusion or frustration.
- Turn prohibitions are difficult to enforce. This applies particularly to left turn bans.

Limitations: Not suitable where a high proportion of drivers wish to make the particular manoeuvre and no alternative route is readily available.

Example locations: Union Street (off King William Road), Goodwood.

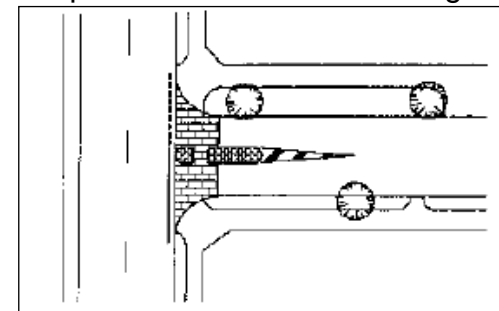
### **Geometric Controls**

Geometric controls involve the installation of physical devices (e.g. road closures, road humps, slow points etc) to control traffic speeds, volumes and to improve safety.

#### **1. Entry Threshold Treatment**

The principal objective of the two lane entry threshold is to provide a visual and tactile cue to drivers of the entry into a residential environment with the expectation of different driving conditions.

A secondary objective is to discourage through traffic by reducing the capacity of the intersection.



#### *Advantages*

- Provides a positive indication that a driver is leaving the arterial road system and entering a local area.
- Minor inconvenience to local users, emergency and service vehicles.
- Reduces entry speeds.
- Can provide a useful crossing for pedestrians.
- Provides landscaping opportunity.

#### *Disadvantages*

- Low speed turns from the arterial road may affect traffic flow on the arterial road
- Provides relatively small areas for landscaping in streets with narrow carriageway widths
- Relatively expensive
- Increases cost of street maintenance.

Example Locations: Campbell Road, Parkside

## 2. Single Lane Slow Points / Single or Two Lane Angled Slow Points

A slow point reduces vehicle speeds on a straight length of residential road by creating a lane narrowing bend which must be negotiated at a slow speed. The speed at which a slow point will be negotiated can be varied according to the design adopted. Typically, the advisory speed limit is 20 km/hr while approaching these devices.



### Advantages

- Reduces speed near the device.
- Reduces overall speed.
- Discourages through traffic.
- Provides a landscaping opportunity

### Disadvantages

- Reduces on-street parking
- Landscaping needs to be maintained to ensure that visibility is not blocked.
- There is the possibility of increased noise.
- Can be hazardous for vehicular traffic and cyclists if not designed and maintained correctly.
- Confrontation between opposing drivers arriving simultaneously could create problems.
- Expensive treatment
- May 'push' traffic to surrounding streets if not used as part of an area wide traffic management scheme

Example Locations: Campbell Road, Parkside and Wood Street, Millswood

## 3. Driveway Entries and Links

The aim of driveway entries and links is to give the appearance of a closed portion of road. A driveway entry should be located at an intersection or T-intersection while a driveway link can be located mid-block along a road.

### Advantages

- Reduces speed near the device.
- Discourages through traffic
- Provides greater visual obstruction than slow points
- Can provide opportunity for substantial landscaping.



### Disadvantages

- May restrict emergency vehicles.
- May increase the area to be maintained
- Cost can be considerable because of its length. (Best installed when the street is due for reconstruction.)
- May 'push' traffic to surrounding streets if not used as part of an area wide traffic management scheme



Example locations: Alpha Road, Prospect and Howard Street, Nailsworth



#### 4. Road Humps (Flat top road humps and Watts Profile road humps) or Road Cushions

The function of this device is to vertically displace a vehicle over a short distance. Therefore, the faster the vehicle speed the greater the discomfort. Speed humps when correctly designed and placed can be very effective in reducing vehicular speeds



##### Advantages

- When correctly positioned, it reduces vehicle speeds in the vicinity of the hump.
- Effectively reduces speeds over the entire length of the street.
- Through traffic is often discouraged from using the street.
- It is a relatively low cost device to install and maintain.



##### Disadvantages

- May increase noise due to braking, acceleration and vertical displacement of vehicles.
- May 'push' traffic to surrounding streets if not used as part of an area wide traffic management scheme



Example locations: Park Street, Hyde Park (Flat Top Hump) and Fashoda Street, Hyde Park (Watts Profile Hump), Leah Street Goodwood (Road Cushions).

#### 5. Roundabouts

A roundabout visually defines an intersection. It reduces speeds and simplifies the allocation of priorities. A roundabout, by allocating priority uniformly to each approach, reduces delays on those approaches which were previously controlled. In addition, through the reduction of vehicle speeds and the nature of the vehicle conflict points within the intersection, the number and severity of accidents is reduced.



##### Advantages

- Reduction in vehicle speeds.
- Orderly and continuous flow of traffic.
- Clarifies priority and simplifies decision making.
- Easy to perform U-turn.
- Roundabouts have a significant advantage over traffic signals in respect to vehicular Delay and maintenance costs.

##### Disadvantages

- Costly land acquisition if the roundabout is large.
- Large vehicles have difficulty negotiating small roundabouts.
- Needs increased illumination at night.
- Expensive treatment

Example Locations: Wattle Street/ Cambridge Terrace intersection, Unley

#### 6. Centre Blister

A 'centre blister' is comprised primarily of an elliptical, curved, circular or diamond shaped median to create a short section of divided road. The centre blister is a horizontal displacement 'slow point' type traffic control device for use on local streets in mid-block locations away from intersections.



### Advantages

- Reduces the vehicle speeds near the device
- May discourage through traffic
- Provides landscaping opportunities

### Disadvantages

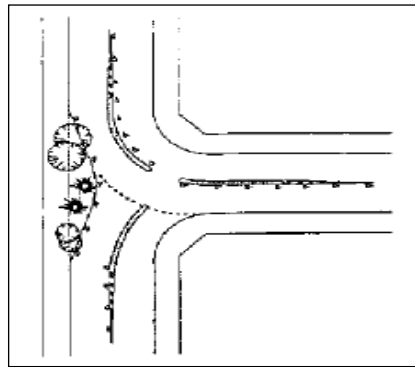
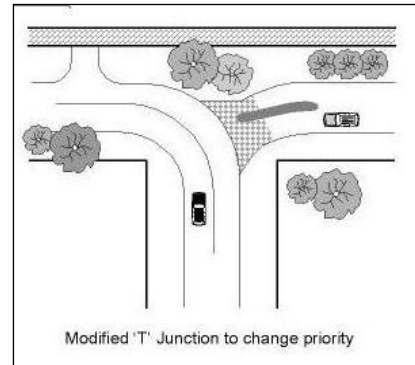
- Reduces on-street parking
- May increase the vehicular noise

Example locations: Maud Street, Parkside

## 7. Modified Intersection

### Advantages

- Reduces vehicle speeds in the vicinity of the device.
- Can lower vehicle speeds along the length of the street when placed in series.
- May discourage through traffic along the top of the 'T'.
- May be used to reinforce changes in priority resulting from alterations to the positioning of STOP signs or GIVE WAY signs.



### Disadvantages

- Can be hazardous for vehicular traffic and may cause confusion regarding intersection priority if not correctly designed.

Example locations: Pratt Avenue, Pooraka

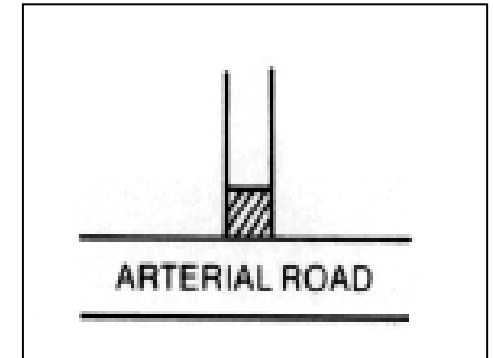
## 8. Road Closures (full or partial)

Where a street is fully closed off at an intersection or mid-block location, vehicles still have access to all properties in the street; generally some reduction in on-street parking but through traffic is

eliminated. Average trip lengths will be increased and accessibility for local residents may be decreased.

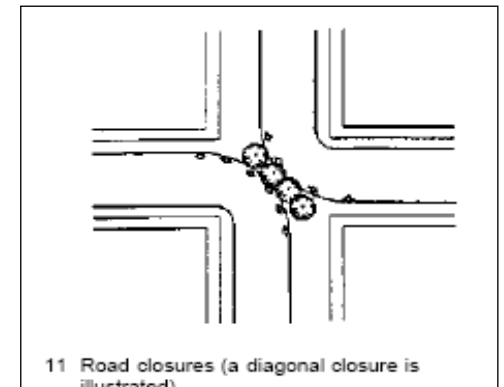
### Advantages

- Reduction in overall accident rate.
- Improvement in overall traffic flow.
- Improvements in pedestrian safety and the residential environment.
- Reduction of costs in reconstruction and maintenance.
- The full road closures can often be increased in length to create green/open space.
- Enlargement of existing open space.



### Disadvantages

- Possible (adverse) shift of accident spots from one road to another.
- Increased traffic congestion on the roads where the traffic is redirected.
- Reduction in travel route options for both the local community and emergency services
- Extra travel distances.
- Parking problems, including reduction of on-street parking spaces if applied with increased length.
- Increased costs in upgrading roads to which increased traffic is directed.
- May adversely impact on local resident's travel patterns



Example locations: Marion Street at Duthy Street end, Parkside