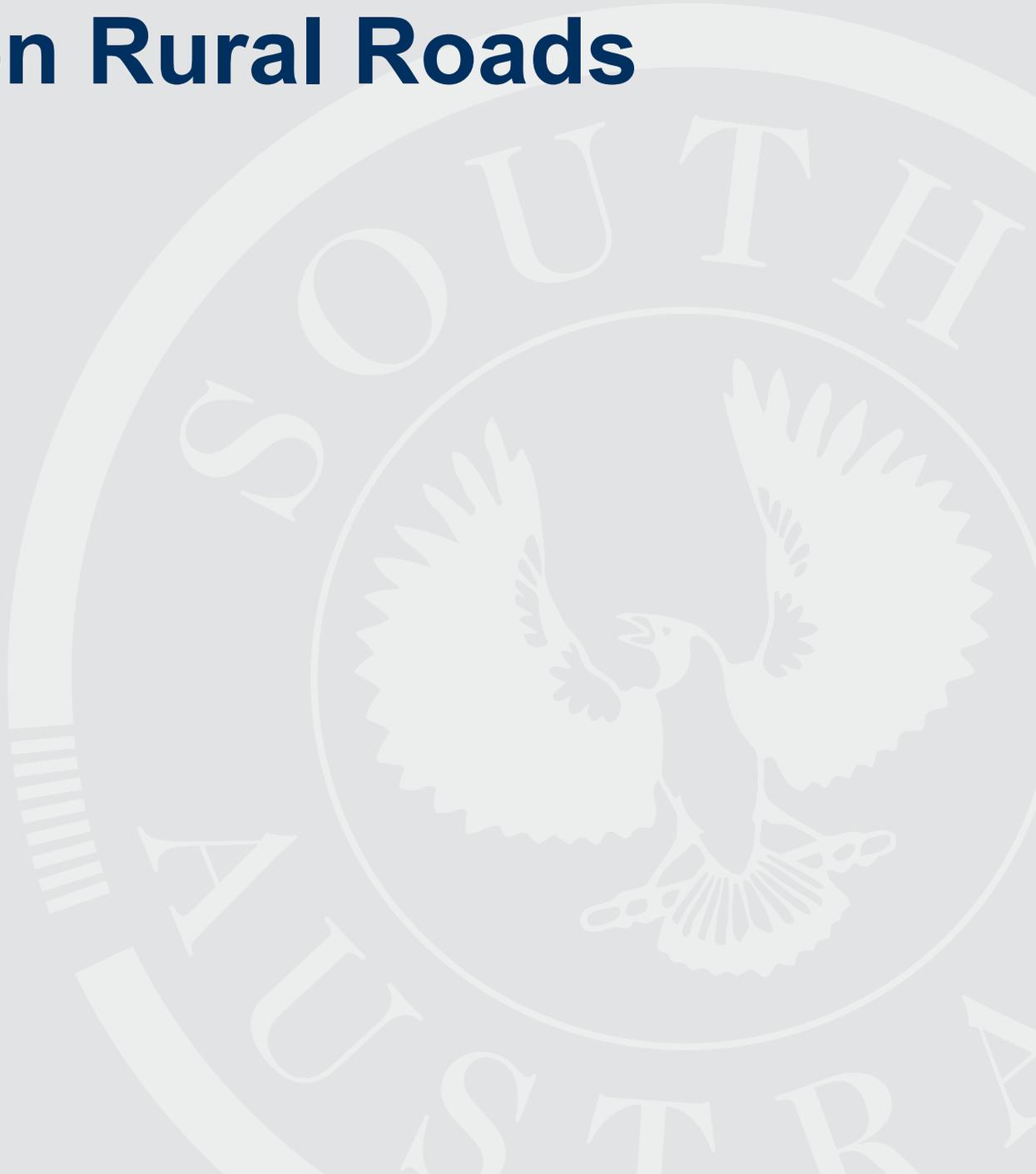


Operational Instruction

20.2

School Bus Stops on Rural Roads



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Government of South Australia
Department for Infrastructure
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ROAD MAINTENANCE AND OPERATION Operational Instructions

School Bus Stops on Rural Roads - 20.2

AMENDMENT RECORD

<i>Version</i>	<i>Date</i>	<i>Section/Figure/Table</i>	<i>Amendment Description</i>
3	Nov 2013		Draft status removed, approved for use
4	Aug 2016	All	Updated to reflect DECD policy, safety responsibilities, requirements for flashing warning lights on buses, MSD removed, marker posts added, references updated
5	Feb 2022	All	Updated references to current documents and policies

This document has been prepared by Traffic Services. It has been approved and authorised for use by Councils, the Department for Infrastructure and Transport and its authorised agents by:

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Manager, Traffic Services
28 February 2022

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1. Scope

This Operational Instruction provides guidelines for the provision of school bus stops on roads under the care, control and management of the Department for Infrastructure and Transport (DIT). Its application is to unkerbed, primarily rural roads which have a speed limit of 80 km/h or greater.

While not actively involved in the planning of school bus routes or bus stop locations, DIT has a role in ensuring that school bus operations can be undertaken safely on DIT roads.

There is no requirement for DIT to inspect every school bus stop or each bus route or to be aware of all bus stop locations. The requirements contained in this Instruction form the basis of what is considered a safe bus stop. Where an existing stop is operating safely and effectively there is no need for DIT intervention even if some of the following requirements are not met. Schools are encouraged to plan their bus stops in line with these guidelines and seek advice from DIT as necessary.

This Instruction is intended for use in situations where road safety or other concerns are referred to DIT for action or advice. These requests should typically be dealt with on an individual basis by the Road Maintenance Delivery Zone as a customer response activity.

2. Background

The Department for Education (DE) advise that approximately 430 bus routes operate throughout regional South Australia, utilising both government owned buses and private contractors. The buses travel on approved routes that are managed by DE, with local responsibility for these bus routes resting with Principals in-charge-of school buses. It is recognised that over time these bus routes and the number and location of bus stops will change to reflect changes in eligible student numbers and any schooling restructures in the local area. Private schools may have their own policies.

The DE School Transport policy states:

“Bus stops should be planned so that buses do not stop more than four times in any 2 km section of the route. Principals should consult with bus drivers and bus contractors to establish bus stops, having regard to safety.

Bus stops should, where possible, be off the road on the left-hand side unless a suitable area for example a parking bay, is conveniently located. There is no requirement for a bus to pick up or set-down students on the school side of the road. However, this should be encouraged where practicable.

Students must not be set-down at other than their normal bus stop without specific approval in advance from the Principal...”

Refer to DE School Transport policy document website
<https://www.education.sa.gov.au/doc/school-transport-policy>

2.1 General Safety Responsibilities

Whilst DE is not directly responsible for the safety of children prior to boarding or alighting from a school bus, consideration must be given to the issue of safety of children waiting for a bus or being dropped off by a bus.

Eliminating the need for students to cross the road is considered a key factor in improving safety around school bus stops. This should be considered when planning safe locations for bus stops along with other factors including selection of sites that provide adequate sight distance and suitable pull-off areas and providing safety messages to parents, carers and students.

A school bus (as defined below) provides a visual cue to motorists and carries the requirement for vehicles to slow down to 25 km/h when it is present. Consideration could therefore be given to enabling children to wait for the school bus to arrive before crossing the road to reach it. A safe waiting area for children on the opposite side of the road would also need to be considered.

Schools can actively promote safe behaviour to parents, carers and students by:

Promoting to the Parents/carers:

- always park on the same side of the road as the bus stop;
- not park on bends, crests or street corners (near road junctions);
- let children out on the footpath (shoulder) side of the vehicle; and
- accompany young children to the bus.

Promoting to the children:

- wait well clear from the roadside for school bus to arrive;
- choose safe places to cross roads, avoid crossing at bends, crests;
- remain seen, don't let bushes block the view of traffic;
- take time to make sure the road is safe to cross;
- wait until the bus has left the bus stop and is out of sight before crossing the road (to minimise the danger of the bus hiding children from view of traffic).

The principal safety measure regarding school buses lies within legislation. The *Road Traffic Act 1961*- Division 9 Section 82 states that a person must not drive a vehicle at a speed greater than 25 km/h while passing a school bus that has stopped on a road apparently for the purpose of permitting children to board or alight. A school bus means a bus that is used mainly for carrying children that displays the warning signs and devices required by the vehicle standards for buses used mainly for carrying children.



TES 13552

To increase conspicuity of the bus at stops, school buses must be fitted with two alternating flashing warning lights to the front and rear of the bus (*Road Traffic (Light Vehicle Standards) Rules 2018* - Part 7, Division 18 - Warning lights and signs on buses carrying children)).

Both DIT and DE indicate that historically the safety record of school bus operations throughout the state is good. Careful planning and selection of safe school bus stop

locations and regular road safety messages targeted at parents and students, as well as the general public is probably the best method of maintaining this record.

2.2 DIT Involvement

Along roads with a speed limit of 80 km/h or greater, particularly along undeveloped roadsides, the majority of drivers may not expect to encounter a stationary or slow moving bus. DIT has a responsibility to provide a level of safety for all road users ensuring, where practical:

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- buses stop where suitable approach sight distance is available so that slow moving, stationary buses and movement of children can be readily seen as other road users approach;
- suitable shoulder width is available to allow for a school bus to pull completely clear of through traffic (refer to Figure 3.5);
- the area surrounding the bus stop is suitable for pedestrians and is maintained to minimise any hazard to children moving to and from the bus; and
- a stationary bus will not pose a hazard to other road users.

DIT's responsibility shall extend to providing for bus stop areas as per the guidelines outlined in Section 3 as well as providing advice and assistance with selecting appropriate and safe locations for school bus stops.

3. Guidelines for the Provision of School Bus Stops

With the large number of stops used on DIT roads and each generally serving a small number of children on a once-to-twice a day basis, construction of bus bays as a standard treatment is not an economically viable option. Where it is possible for a school bus to stop completely clear of the road reserve (such as a roadside rest stop) then the local school Principal should be encouraged to use these opportunities when planning the school bus route.

Ensuring adequate sight distance and sufficient shoulder width at bus stops should be sufficient to provide a reasonably safe environment to school bus users. Stopping sight distance (SSD) shall be available for vehicles approaching from the rear of the bus, as shown in Figure 3.1 where the SSD is defined in Table 3.1.

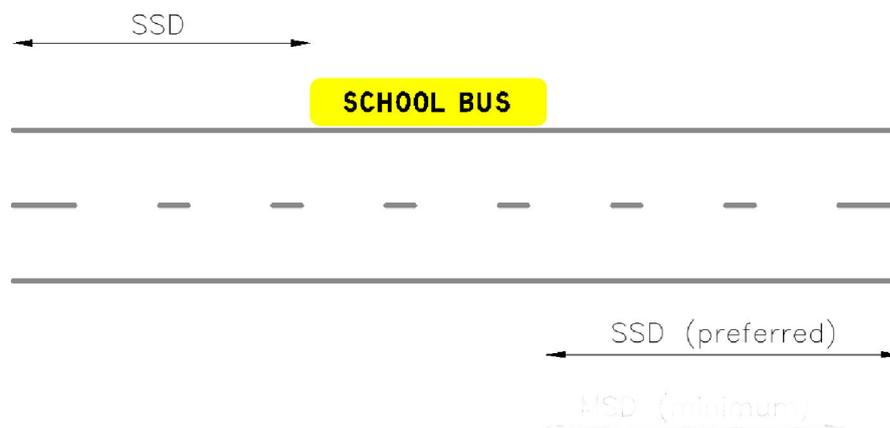


Figure 3.1: Sight Distance from Bus Stop Location

85 th percentile speed (km/h)	Stopping Sight Distance (SSD)
80	126
90	151
100	179
110	210

Table 3.1: Minimum Stopping Sight Distances

Bus stops may be located at minor junctions with local roads along which children may travel to meet the bus. In this case the bus stop should be located on the departure sides of the junction, as shown in Figure 3.2.

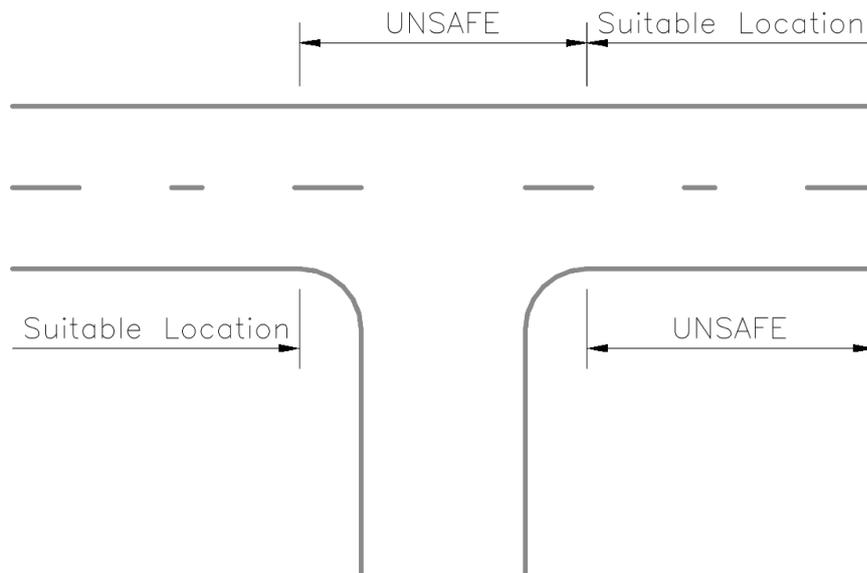


Figure 3.2: Suitable Stop Locations at Minor Intersections

Where it can be avoided, stops should not be placed within intersections with Basic Auxiliary Right (BAR) or Channelized Right-Turn (CHR) treatments with other main roads (refer figure 3.3 and 3.4 below).

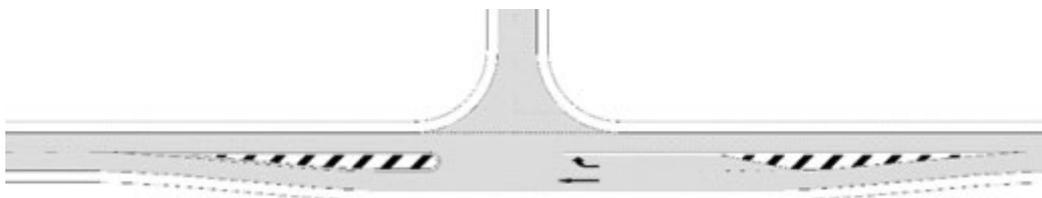


Figure 3.3: Channelised Right Turn treatment on a rural intersection.

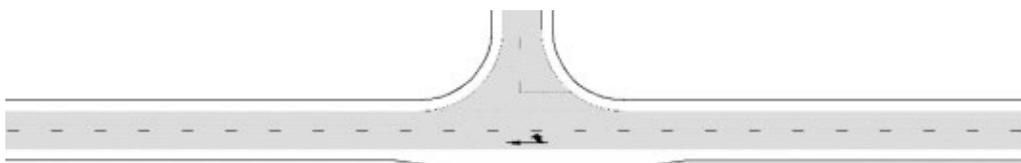


Figure 3.4: Basic Auxiliary Right treatment on a rural intersection.

In addition to sight distance, roadside bus stops shall have a clear, flat and trafficable shoulder (standing area) of at least 45 m in length and 3 m in width (measured from the edge line, or edge of seal if no edge line is present) (refer to Figure 3.5.). This should be sufficient to allow a bus to pull clear of the carriageway and not impede general traffic flow. The bus will still be required to decelerate and accelerate on the carriageway and not on the shoulder. The maximum crossfall of this standing area should not exceed 5%.

Beyond the standing area for a further 3 m or to the property boundary, whichever is closer, the road verge should be free of ditches, drains, steep slopes or large drops from the shoulder to the surrounding area, which may pose a hazard to child pedestrians when moving to or from the bus. Any significant vegetation in this zone shall be retained, but growth (particularly seasonal weeds and grasses) should be controlled so that it does not prevent the bus pulling clear of other traffic, shield waiting children from the sight of drivers approaching from either direction or pose a hazard to child pedestrians using the road verge. Open surfaces on the verge which are prone to degrading (ie, becoming muddy or slippery) may be sheeted with a suitable material, however the road verge area (outside of the shoulder) should not generally be sheeted or sealed.

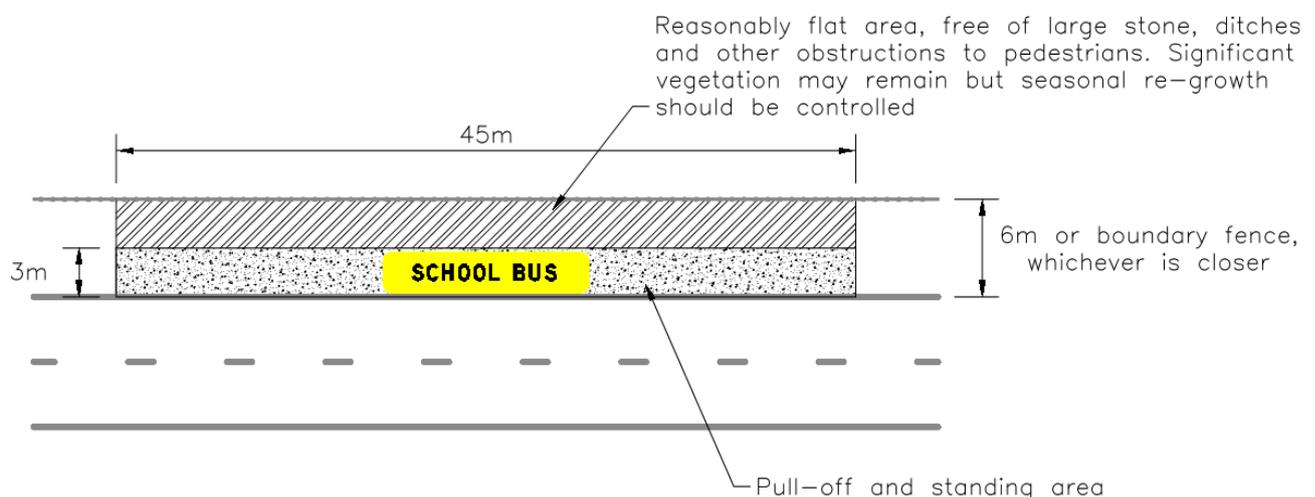


Figure 3.5: General Layout of School Bus Stop

3.1 Maintenance

Sufficient maintenance effort to keep the shoulder in a safe and useable condition should be achieved as part of normal shoulder maintenance as described in the DIT **Master Specification, M10 Maintenance – Sealed Roads**. The once-to-twice a day use should not result in significant degradation of the shoulder. The rate of shoulder wear or damage will also depend on the amount of other shoulder traffic generated through the school bus operation (ie., parents picking up, or dropping off children).

The DIT **Master Specification, M14 Maintenance - Vegetation** addresses the responsibility of DIT to ensure that tree overhangs and other vegetation growth are controlled to cater for all legal vehicle movements, which should include buses stopping on the shoulder. Control of vegetation beyond the bus standing area, is in most cases the responsibility of Local Government. As such any concerns with vegetation around bus stops should be directed to the appropriate local Council.

3.2 Shoulder Widening

In situations where there is insufficient shoulder width for a bus to pull clear of passing traffic, or where the edge of formation drops steeply making it unsafe for children to access the bus, localised shoulder widening should be considered, provided that:

- a suitable alternative site is not available within 300 m; and
- it can be established that there is a strong likelihood that the stop will have an appropriate level of use in the future.

Shoulder widening need only be limited to the 45 m x 3 m area, recommended above, although some additional earthworks may be required to ensure that children can safely access the bus from the road verge. The transition from shoulder to verge must be even, well drained and free from tripping hazards.

Note: The measure for continual use of the stop has not been quantified at this stage. A suggested measure is that the stop will continue to be used for at least 1 year, with the likelihood of being used on an intermittent basis in the future. This would need to be established in consultation with the current users of the stop and the school Principal. This decision should be made on a case-by-case basis by the Road Maintenance Delivery Zone Manager.

Additional widening works which may have been requested, and which are considered appropriate, should only be undertaken and funded by Local Government or local schools. Care should be taken to avoid creating an excessively large area which may encourage use by other road users.

3.3 Shoulder Sealing

Should shoulder deterioration be accelerated due to school bus use to such an extent where the shoulder become dangerous or requires additional effort in excess of what would normally be expected for shoulder maintenance, consideration should be given to sealing the shoulder. If sealing is to be undertaken, the long term use of the school bus stop will need to be established.

Note: It is suggest that a period of 2 years use with the existing users, with the possibility of the stop being used again during the lifetime of the seal (up to 10 years, although the seal may deteriorate sooner than this with a lack of traffic) may be appropriate. This again would need to be established in consultation with the existing users of the stop and with the local school Principal. Should the existing use be for a period less than this, additional shoulder repair and maintenance may be more economically sensible than providing a seal. This decision should be made on a case-by-case basis by the Road Maintenance Delivery Zone Manager.

This sealed surface is not intended for use as a parking facility or rest stop by other road users. Other facilities such as Parking Bays and Rest Areas are provided for this purpose. For this reason sealing should be limited in size, to the stopping area of 45 m x 3 m. If for some reason a larger area is requested and it is considered appropriate, additional funding should be sought from Local Government or local schools to undertake this work.

4. Warning Signs

IMPORTANT: In general warning signs are not to be installed at bus stop locations, or along bus routes. **Signs should only be used as a last resort in hazardous locations and should not be used to justify unsafe stopping areas.**

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For a warning sign to be effective it needs to alert the driver to a hazard on, or near the road that may require extra attention, but the hazard should be identifiable to drivers as they reach it. To the majority of drivers on DIT roads encountering a school bus would not be a common occurrence and permanent warning signs would have little meaning if a bus was never sighted. In addition, maintaining the appropriateness of school bus warning signs may also be difficult as the location of stops and routes are subject to change without DIT involvement. Signs left in locations where buses no longer stop may lead to an increased general disregard of these signs by drivers.

Therefore, the installation of signs at bus stop locations where good sight distance is available and where the bus can stop without obstructing traffic should be discouraged. The best warning device that can be used is the bus itself. Ensuring that the bus is readily seen, both in terms of its appearance and having adequate sight distance, will have the greatest impact in alerting drivers to its presence and the likelihood of children being on the roadside.

The Government, through both DE and DIT has a responsibility to provide bus stops at non-hazardous locations wherever possible. Therefore, preference should be given to finding a safer alternative location for hazardous stops, which provide adequate sight distance and suitable pull-off areas. Warning signs shall only be installed if the most suitable location for the bus stop has:

- sight distance is less than the SSD requirements outlined in Table 3.1; or
- insufficient shoulder area for a bus to stop completely clear of the carriageway but not blocking the carriageway for other traffic, and the sight distance is less than the stopping sight distance from either direction.

If required, the warning sign shall be a W6-3, Children Crossing sign with a W8-SA56 supplementary plate which has the legend "SCHOOL BUS". The following sizes shall be used:

- W6-3B and W8-SA56B for locations subject to an 85th percentile speed of less than 90 km/h; or
- W6-3C and W8-SA56C for locations subject to an 85th percentile speed of 90 km/h or greater.

To maintain the credibility of these warning signs, it is important that sites be reviewed annually and signs are removed as soon as the stop ceases to be used.

Therefore, in addition to installing the sign, a formal agreement should be made with the local school Principal which will require the Principal to notify DIT when these hazardous stops are no longer used or are relocated.

The cost incurred for erection and removal of these signs shall be met by DIT.



W6-3 & W8-SA56

5. Bus Stop Marker Posts

Operators and users of the school bus routes would generally be familiar with both the route and location of stops. Therefore, formal identification of bus stops and routes, as is used with most urban based public bus systems, would not generally be required. However, there may be situations where a form of identification is needed for bus stops, particularly if a site has been selected in preference to other nearby locations for safety reasons.

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Markers shall be permitted if they meet the following conditions:

- the bus stop marker post should conform with DIT Master Specification Part RD-LM-S3 Supply of Guide Posts and Delineators and Part RD-LM-C3 Installation of Guide Posts and Delineators, with exception to the post colour and use of delineators.
- the post shall be a non-reflective yellow colour and may have the legend "SCHOOL BUS" in black lettering along its length;
- the post shall have a maximum height of 1000 mm above ground level; and
- the post shall be placed clear of the formed shoulder, maintained side drain or 6 m from the edge of seal, whichever is the greater distance from the road.

DIT will take no responsibility for the installation, supply or maintenance of these posts.

Note: The marker is intended to be used at a suitable waiting spot for children, or stopping area on the roadside, particularly when the stop location has been chosen for safety reasons. Having a marker post may prevent the stop from drifting along the roadside. Placing the marker well back from the roadside but still visible to those who are looking for it, will mean it should be out of other driver's field of view and would not compete with other traffic signs.

6. References

Austroads (2021) Guide to Road Design, Part 3: Geometric Design

Austroads (2020) Guide to Traffic Management, Part 11: Parking Management Techniques

Queensland Department of Transport and Main Roads (2019) Supplement - Traffic and Road Use Management Volume 2 – Guide to Road Safety, Part 5: Road Safety for Rural and Remote Areas, Section 4.2

Department of Education (2021) [School Transport Policy](https://www.education.sa.gov.au/doc/school-transport-policy)
<https://www.education.sa.gov.au/doc/school-transport-policy>