

Operational Instruction

14.4

Left Turn on Red Permitted After Stopping Sign

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TRAFFIC MANAGEMENT Operational Instructions

Left Turn on Red Permitted After Stopping Sign - 14. 4

AMENDMENT RECORD

Version	Date	Section/Figure/Table	Amendment Description
1	6 May 2020	All	Original issue - Criteria for use based on AS 1742.14, Austroads and NSW guidelines
2	Mar 2023	All Sections 1 & 2 Section 4 Appendix A	Format changes Amendment of wording for end of trial Inclusion of Figure 4.1, taken from AS 1742.14, Fig. 7.4 Creation of Appendix A with list of current installation sites

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Stephen Pascale
Manager, Traffic Services
23 / 03 / 2023

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Traffic Services
Email : dit.tassadmins@sa.gov.au

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1. Scope

The Left Turn on Red (LTOR) Permitted After Stopping sign (R2-20) was previously included in *AS 1742.14 MUTCD Part 14: Traffic Signals* for use at minor side road approaches to main roads at signalised intersections and adopted in South Australia after a trial period.

This Operational Instruction details the assessment criteria to allow its use at signalised intersections.

2. Background

Prior to the introduction of the Australian Road Rules in 1999, the 'Left turn on red permitted after stopping' rule did not exist in South Australia. Following the introduction of this rule, eleven sites were trialled in South Australia. Due to subsequent site geometry changes and some complaints from pedestrians about poor observance of this rule, the signs were removed from five of these sites.

In 2019 the Department conducted a state-wide audit of all 747 state-wide signalised intersection locations to determine if further sites could be approved for the installation of 'Left Turn On Red Permitted After Stopping' signage. From this audit, twelve sites were chosen for the installation of the LTOR signs.

Refer to Appendix A for a list of the current eighteen (18) operating sites.

The criteria included in this Operational Instruction was based on the *AS 1742.14 MUTCD Part 14: Traffic Signals*, *Austroroads Guide to Traffic Management Part 10: Traffic Communication Devices* and NSW Road and Marine Services' *Traffic Signal Design Appendix E*.

3. Assessment Criteria

Left turn on red shall NOT be used in the following situations:

- Where the speed limit is greater than 60 km/h.
- Where a safety camera is installed.
- Where there is more than one lane marked to turn left. If the nearside lane is an exclusive left turn lane and vehicles in the next lane are also permitted to turn left, then LTOR is not to be permitted.
- Where there is a red left turn arrow.
- Where there is a high volume of left turning vehicles (> 2 vehicles per minute).
- Where there is a conflicting right turn phase on the opposite approach.
- Where there is a 'U-turn permitted' sign installed.

- Where there is restricted sight distance to the right. LTOR must not be permitted if it does not meet the sight distance requirements specified in *AS 1742.14 MUTCD Part 14: Traffic Signals* (2014) section 7.5.2 (i.e., 70 m for 50 km/h speed limit or 85 m for 60 km/h speed limit measured from 1.1 m above road surface, 2.5 m from face of kerb to 0.6 m above road surface).
- Where there is complex intersection geometry, i.e., a maximum of four approaches, at approximately right angles.
- Where children, the elderly or people with disabilities regularly cross the approach. LTOR is not to be permitted from any approach where more than 30 children, the elderly, or people with disabilities, cross that approach in anyone hour period, on an average day.
- Where there is a high volume of pedestrians (more than 50 per hour) or where the intersection is located in a high pedestrian activity area. LTOR is not suitable for designated high pedestrian areas or other locations where there are high numbers of pedestrians such as Priority Pedestrian Areas and Local Pedestrian Areas (as detailed in DIT's *Functional Hierarchy*), roads with significant place aspect (according to Austroads *Guide to Traffic Management Part 4: Network Management*) or destinations of Regional or Metropolitan Place significance (according to the *Streets for People Compendium*).
- Where a pedestrian phase across the LTOR approach is introduced mid-cycle.
- Where a scramble crossing, or exclusive pedestrian phase is in place at the intersection.
- Where the intersection is within 60 m of a railway level crossing.
- Where a bicycle storage facility (bicycle box) is installed on the LTOR approach.

The following secondary factors must also be taken into consideration when assessing potential LTOR sites. LTOR must not be installed where six or more of the following conditions exist:

- Where there is a high crash record at the intersection which may be compounded by LTOR. As a guide if there are more than three accidents, in a three-year period involving left turning vehicles, this may indicate that LTOR is undesirable. Similarly, if there are four or more accidents involving lane change type conflicts (affecting left turn vehicles) on the right-hand approach, this may also indicate that LTOR is undesirable.
- Where there is a sheltered left turn lane.
- Where there is insufficient capacity on the primary road to receive left turning traffic.
- Where there is inadequate turning clearance for a light vehicle to complete its turning manoeuvre without crossing the lane line on the primary road.
- Where the intersection geometry may make it difficult for LTOR drivers to determine which movements are in conflict with the left turn.

- Where the geometry on the approach to the intersection may make it difficult for LTOR drivers to determine which lane an approaching vehicle is in.
- Where there may be frequent lane changing on the approach to the intersection, or frequent weaving by LTOR vehicles on departure from the intersection (e.g., due to closely spaced or staggered T-intersections).
- Where a bus stop close to the intersection may restrict sight distance when a bus is present or promote frequent lane changing.
- Where there are greater than 5% commercial vehicles performing the left turn movement and the left turning path for trucks or buses cannot be accommodated without encroaching over the lane line on the approach to the intersection or the dividing line on the departure.
- Where bicycles regularly cross the approach (either at the crosswalk or as a bicycle lane). LTOR should not be permitted where it would cross a shared path, separated path, bicycle lane, or single or bi-directional bicycle path, or there is frequent bicycle use on the footpath (e.g., route to school or shopping district).
- Where LTOR vehicles would regularly cut in front of bicycles waiting for a green signal.
- Where the intersection is located near a school, shopping centre, nursing home or similar generator of pedestrian traffic.
- Where sight distance is met but there are other visibility restrictions such as deviations in the primary road on approach to the intersection, or trees or stobie poles close to the road.

Assessment against the above criteria shall be documented in the Traffic Impact Statement for approval by the Manager, Traffic Services.

Existing signs already in place since 2019 have been assessed against the above criteria. Any additional proposed LTOR will only be considered for signalised intersections installed after this date.

4. Signs

Where a site is assessed as suitable, the R2-20 sign shall be installed in accordance with figure 4.1, with one sign on the primary signal post, directly below the signal assembly and an additional sign on the tertiary signal post so that drivers can see this sign when stopped at the stop bar.

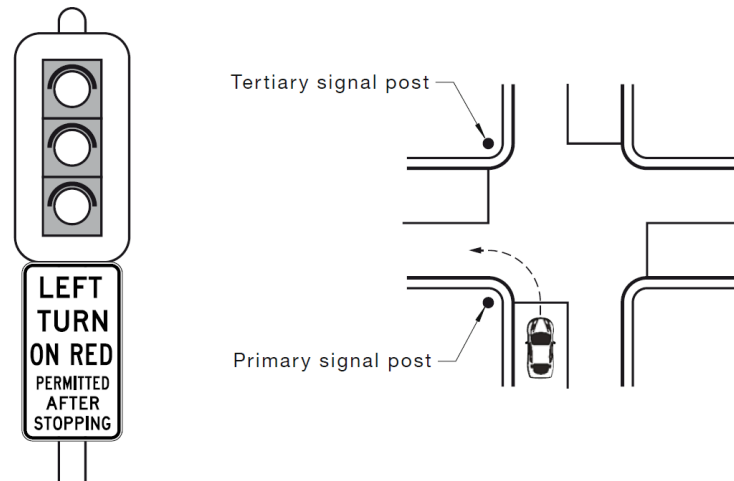


Figure 4.1 – Location of LTOR Signs

5. Approval

Left Turn on Red Permitted After Stopping (R2-20) signs on Council roads require approval of DIT's Manager, Traffic Services as this sign is listed in the *Code of Technical Requirements* as requiring separate approval from the Commissioner of Highways or his / her authorised delegate.

LTOR may be installed by DIT on roads under the care, control and management of the Commissioner of Highways with the approval of the Manager, Traffic Services.

Appendix A – List of current* sites with LTOR installed.

Suburb	Major Road	Minor Road	Approach	No. of Signs
BRIGHTON	Brighton Road	Sturt Road	W	1
MANSFIELD PARK	Grand Junction Road	Richards Street	S	1
MARLESTON	South Road	Barwell Avenue	W	1
NEWTON	Montacute Road	Forest Avenue	S	2
NEWTON	Montacute Road	Forest Avenue	N	2
NEWTON	Newton Road	Playford Road	E	2
SALISBURY	Park Terrace	Brown Terrace	S	2
ADELAIDE	Port Road	Gaol Road	N	1
COLLEGE PARK	Payneham Road	Harrow Road	N	2
HECTORVILLE	Montacute Road	Hectorville Road	S	2
KENSINGTON GARDENS	Glynburn Road	The Parade	E	2
KENSINGTON GARDENS	Glynburn Road	The Parade	W	2
WOODVILLE GARDENS	Hanson Road	Ninth Avenue	E	2
WOODVILLE NORTH	Hanson Road	Ninth Avenue	W	2
PARK HOLME	Oaklands Road	The Parade W	S	2
NETHERBY	Fullarton Road	Claremont Avenue	E	2
PARK HOLME	Marion Road	Sixth Avenue	E	2
PETERHEAD	Victoria Road	Wills Street	W	1
**BROMPTON	Torrens Road	Chief Street	S	

NOTES

* Current as of March 2023

**** Removed during recent upgrade of Torrens Road and not replaced**