

# Lapping of Guardrail Terminals

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## Preamble

On two lane, two way roads an approved crashworthy terminal is often installed on the departure end of semi-rigid steel rail safety barriers.

The purpose of this Technical Advice is to inform Road Agencies of the recommended installation of guardrail terminals when the terminal head is facing away from adjacent traffic flow.

## Audience

- Road Agencies
- Guardrail manufacturers

## Background

When installed as a leading terminal, standard practice is to lap the terminal rails in the direction of travel of the adjacent traffic lane. This is done to minimise potential vehicle snagging on the end of a rail section should the guardrail pocket under impact. In recent installations, it has been noted that this has also been done (i.e. lapping the terminal rails in the direction of travel of the adjacent traffic lane) when the terminal is used as a departure terminal (refer Figure 1).

Figure 1: Departure terminal (circled in red)



Source: Victorian Department of Transport

## Commentary

To ensure correct operation, terminal rails must be lapped in the direction of impacting traffic (refer Figure 2).

For leading terminals on two lane, two way roads, impacting traffic is considered to be from the adjacent traffic lane. For departure terminals on two lane, two way roads, impacting traffic is considered to be from the opposing traffic lane (i.e. **not** the adjacent traffic lane).

To reduce the possibility of the terminal end failing when impacted by opposing traffic, it is recommended that rails be lapped as though it were installed as a leading end of a right side installation.

This treatment applies to the whole of the length of the terminal and its splice joints (refer Figure 3). Please refer to the supplier installation guidelines for the specific terminal installation details and lengths.

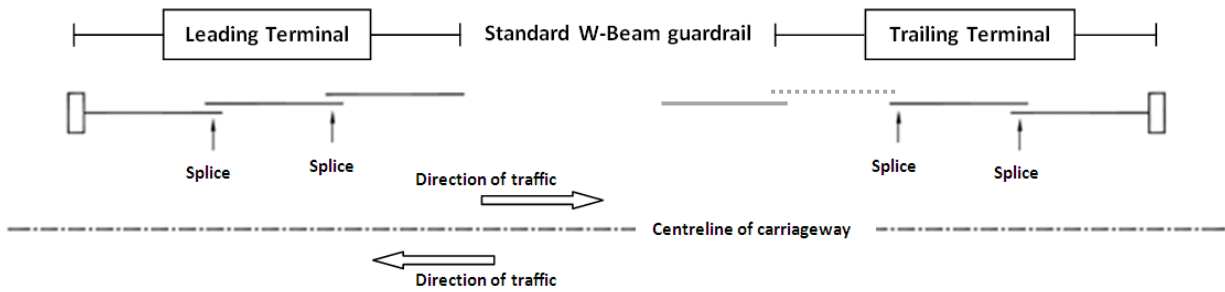
## Lapping of Guardrail Terminals

Figure 2: Lapping detail



Source: Victorian Department of Transport

Figure 3: Lapping of semi-rigid guardrail (THRIE-BEAM or W-BEAM)



Source: Victorian Department of Transport

## Recommendation

As a trailing terminal can be impacted by opposing traffic, the terminal must be installed as though it were a leading terminal of a right side installation and the rails lapped as shown in Figure 3.