

## Lapping of Guardrail Terminals

### Preamble

On two lane, two way roads an approved 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 on the recommended installation of guardrail terminals when the terminal head is facing away from adjacent traffic flow.

### Audience

- Road Agencies
- Guardrail manufacturers

### Background

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



Figure 1 – Departure terminal

### Commentary

To ensure correct operation, leading terminal rails must be lapped in the direction of traffic (refer Figure 2). However installation of rails closer to terminals installed on the trailing end of the guardrail installation may cause the end terminal to lock up and fail when impacted by opposing traffic.



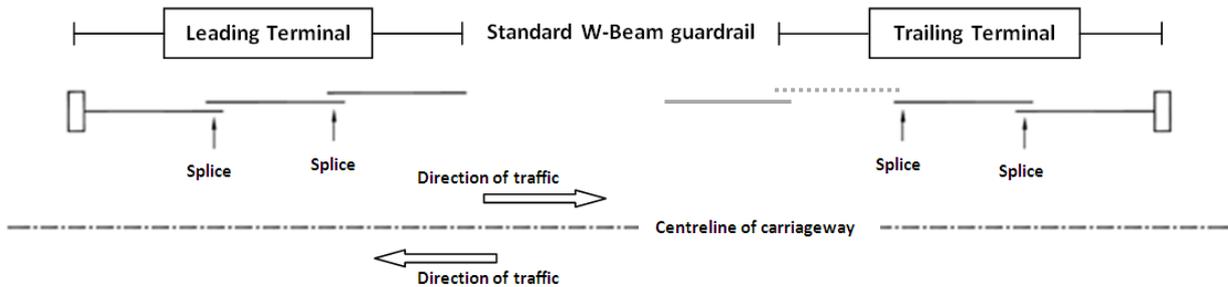
Figure 2 – Lapping detail

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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.

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



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

### Recommendation

When a terminal is used as a departure treatment that can be impacted by opposing traffic, the terminal must be installed as though it were a leading terminal.