

(3) GR-7 Breakaway Cable Terminal Installation:

When using the St'd. GR-7 terminals on standard shoulders, the 1.2 m flare as specified in the standard drawing or manufacturer's specifications must be provided for the installation to function as tested. This is considered essential to proper performance for end-on impacts to eliminate the potential of spearing. In consideration of the 1.2 m flare requirement to construct the terminal treatment for St'd. GR-7, the shoulder in the terminal area must be widened sufficiently to accommodate site preparation for the terminal. The terminal should be located, or the barrier may need to be extended as needed, to provide a clear run-out path behind the terminal.

On bridge replacement projects and other projects (involving guardrail updates) on which existing shoulders are of insufficient width and for which there are no provisions for widening such shoulders, additional fill material is required to be placed to ensure that the flare can be correctly installed. Typical installation details are shown in Standard GR-7\* with a tabulation of the applicable widths. (Projects with paved shoulders - Details are shown on Standard MC-4).

When this situation occurs for the GR-7 terminals on projects without normal grading operations, a pay item [Guardrail Terminal site preparation (GR- ) - Item Code 13349 with pay unit of Each] is to be used to cover the required embankment, benching and reseeding.

(A Special Provision Copied Note is available for use in contracts involving this pay item.)

New construction projects provide the necessary shoulder widening for the required guardrail terminals; therefore, the separate pay item for site preparation is not applicable.

(4) GR-9 Alternate Breakaway Cable Terminal Installation:

If the 1.2 m offset cannot be achieved to properly install the Standard GR-7 terminal, evaluate using a St'd. GR-9 or request a special design terminal treatment from the [Standards/Special Design Section](#). The GR-9 terminal treatment should only be used after an analysis including additional right of way costs indicates it is more cost effective than providing the proper site preparation to install a St'd. GR-7 or to extend the guardrail (60 m maximum) to provide a St'd. GR-6 terminal.

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\* Rev. 1/10