

BRIDGE DESIGN MEMORANDUM – DM0309

TO: RPG Structural Engineers
Design Consultants

DATE: July 16, 2009

RE: Guardrail-To-Bridge-Rail Transitions
Section 17.6.1.3 of the *SCDOT Bridge Design Manual*

Section 17.6.1.3 of the *SCDOT Bridge Design Manual* shall be deleted and replaced with the following:

17.6.1.3 Guardrail-To-Bridge-Rail Transitions

The roadway designer is responsible for specifying the guardrail-to-bridge-rail transition for the approaching roadway. However, site conditions may present problems for the necessary transition. Therefore, the bridge designer should coordinate with the roadway designer to ensure compatibility between the guardrail-to-bridge-rail transition and the site.

The bridge designer shall review the proposed guardrail-to-bridge-rail transition to determine if any conflicts exist between bridge components (such as end bent caps or sleeper slabs) and the guardrail post installations. If a conflict is found, the bridge designer shall first attempt to revise the details of the bridge component to permit the installation of driven guardrail posts in accordance with the *SCDOT Standard Drawings*. If necessary, the bridge designer may specify additional guardrail offset blocks. Two offset blocks are permitted at any post location and a third offset block may be used at one post only for each guardrail-to-bridge-rail transition.

If the conflict cannot be removed, the bridge designer shall design and detail a method for attaching the guardrail post to the bridge component and include the attachment details in the bridge plans.



In cases where guardrail post attachments or additional guardrail offset blocks are necessary, the bridge designer must coordinate with the roadway designer to ensure that the roadway plans include information describing the installation requirements. For installations requiring additional offset blocks, the roadway designer must determine if additional length guardrail posts are needed. The plans should contain a note instructing the Contractor to include all costs for additional guardrail offset blocks, additional length posts, and/or guardrail post attachments in the unit price bid for Thrie Beam Guardrail Bridge Connector.

Original Signed by E. S. Eargle on July 16, 2009

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Bridge Maintenance Engineer
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Regional Production Engineers
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