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FROM: Jay A. Bennett, PE
State Roadway Design Engineer

DATE: September 4, 2002

SUBJECT: Three New Guardrail Details

The Guardrail Committee has approved three new guardrail details. The first two details are for guardrail anchor units at barriers (Type B-83 and Type B-77) and the third detail is for median cable guiderail placement.

Standard guardrail anchor unit Type III will continue to be the guardrail anchor unit of choice for new bridge approaches. Guardrail anchor unit Type B-83 is recommended for existing bridge retrofits, and guardrail anchor unit Type B-77 is recommended at underpasses. Please use these details as described below:

The **Type B-83 Guardrail Anchor Unit** has passed the NCHRP-350 crash test specifications and should be used on existing bridges with a jersey shape barrier and a curb on the approach slab. The curb must extend the full pay limits of the guardrail anchor unit. This may require additional curb construction.

The **Type B-77 Guardrail Anchor Unit** has passed the NCHRP-350 crash test specifications, and its primary use is for attachment to precast reinforced concrete barrier at underpasses. Special details 857D01 (Detail for Reinforced Concrete Barrier) show the

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barrier unit modification required to coincide with the Type B-77 Design. This anchor unit can also be used on existing bridges with a jersey shape barrier that has no approaching curb.

The **Cable Guiderail Placement Detail** was developed to ensure that the cable guiderail is installed to NCHRP-350 specification. The NCHRP-350 cable guiderail specifications indicate that the cable guiderail should not be placed on a slope greater than 6:1. As shown in the new detail, the cable guiderail should be placed on the outside of the median ditch in curves on the 6:1 slope. The detail also shows how to place cable guiderail at false sump (ditch block) locations.

Please start incorporating these new details into the January 2003 letting. If there are any questions, please contact me or Art McMillan, Project Design Engineer.

JAB/ARM

Attachment

cc w/att: Debbie Barbour, PE
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