Midwest States Pooled Fund Program Consulting Quarterly Summary

Midwest Roadside Safety Facility

07-01-2005 to 10-01-2005

Wisconsin Barrier Design

Question

State: WI
Date: 08-31-2005

Wisconsin began by asking MwRSF to check the adequacy of a concrete barrier they had designed to meet the TL-4 impact condition. Initial calculations performed by MwRSF found that the barrier did not posses sufficient capacity to meet TL-4 as designed, MwRSF suggested some changes. After the suggested changes were determined to cost too much, they requested a new concrete barrier design. The concrete barrier was designed to be capable of being slip formed and attached to an existing roadway or shoulder using tie bars that could be inserted during the paving of the roadway. These bars are currently used in a similar manner to connect shoulder pavement to mainline pavement by WiDOT.

A TL-4 barrier designed was presented to Wisconsin, but it proved to be too costly. WiDOT then sought and received federal approval to lower their concrete barrier design to TL-3. It was still desired that the TL-3 version of the barrier be slip-formable and be capable to attachment to an existing roadway or shoulder with tie bars. The first TL-3 barrier was completed, but there were issues with the stirrups and the slip forming capabilities. The stirrups were then redesigned, allowing slip forming capabilities, but once again the design was too costly and it was abandoned by Wisconsin in favor of a past design.

Response

Date: 08-31-2005

See attached.

Attachment: https://mwrsf-qa.unl.edu/attachments/bffafbd8a76c095284eb665cd5ffb4a5.pdf

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