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May 1, 2006

MEMORANDUM

06-11

TO: District Directors
District Construction Engineers
Toll Road Operations Engineer
District Materials & Tests Engineers
District Highway Management Directors
District Area Engineers
Project Engineers/Supervisors

FROM: Mark A. Miller, Director *Mark A. Miller*
Division of Construction Management

SUBJECT: Retrofitted Tie Bars

This memorandum is being issued as a reminder that chemical anchoring systems must be from the Department's List of Approved Materials and that installation must be done according to the manufacturer's recommendations. The method of dipping retrofit tie-bars into a chemical anchoring mix and then inserting them into the drilled hole in the pavement is not an acceptable alternative to the manufacturer's recommendations.

A Recurring Special Provision (copy attached) concerning installation of retrofitted tie bars will be added to contracts let on or after June 21, 2006. The provision provides clarification of how retrofit tie bars are to be anchored into the pavement. Any questions concerning this issue should be referred to the Division of Construction Management.

MAM:rlh

attachment

RETROFITTED TIE BARS

The Standard Specifications are Revised as follows:

SECTION 503, BEGIN LINE 134, INSERT AS FOLLOWS:

(g) Retrofitted Tie Bars

Retrofitted tie bars shall be secured at right angles to the pavement with a chemical anchor system *in accordance with the manufacturer's recommendation. The chemical anchor system shall be injected to the back of the hole to eliminate air pockets prior to inserting the bar. The quantity of material injected shall be sufficient to disperse the material along the entire length of the bar and completely fill the annular space. After the anchor system has been injected, the bar shall be fully inserted using a back-and-forth twisting motion, leaving the proper length exposed. If it is necessary to use a hammer to seat the bar, the exposed end shall be protected with a wood block.*

When a capsule type chemical anchor system is used, the capsules shall be conditioned as per the manufacturer's installation instructions, if required, and placed at the back of the hole. The number of capsules shall be sufficient to disperse the material along the entire length of the bar and completely fill the annular space. After the capsules have been placed the bar shall be fully inserted in accordance with the manufacturer's installation instructions.
