

New Jersey Department of Transportation

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Baseline Document Change Announcement

**Revision to Sections 617 and 621, Sodium Chloride Content
BDC98S-017**

October 15, 1999

**Subject: Revision to the 1998 Supplemental Specifications to the 1996 Standard Specifications,
Subsections 617.12 Temporary Crash Cushions, A. Inertial Barrier Systems and
621.03 Construction Requirements, A. Inertial Barrier Systems.**

Subsections 617.12 Temporary Crash Cushions, A. Inertial Barrier System and 621.03 Construction Requirements, A. Inertial Barrier Systems have been revised in order to specify a range of sodium chloride (NaCl) to be added to Inertial Barrier modules rather than a minimum amount as currently indicated.

Field investigation of a module revealed that the sodium chloride content far exceeded the desirable level causing fusion of the salt and sand within the module. This occurs primarily when the modules are filled with sand that exceeds the moisture content and the percent by weight of sodium chloride (NaCl). Through crystallization, the salt/sand mixture fuses together, consequently, forming a solid block of salt and sand within the module. A range of five to seven percent of sodium chloride by weight, evenly dispersed throughout the sand prevents freezing and is also easier to construct, inspect and improve.

Therefore, the following revisions are made to the 1996 Standard Specifications for Road and Bridge Construction as amended by the 1998 Supplemental Specifications:

617.12 Temporary Crash Cushions.

A. Inertial Barrier System.

THE THIRD PARAGRAPH IS CHANGED TO:

Loose sand conforming to Subsection 901.10, Subpart C, shall be placed within each module to a depth recommended by the manufacturer. The sand shall have a dry density of 1.4 to 1.6 megagrams per cubic meter and a three percent maximum allowable moisture content. Five to seven percent of sodium chloride (NaCl) by weight shall be added and evenly dispersed throughout the sand to prevent freezing. Calcium chloride (CaCl₂) shall not be substituted for sodium chloride.

SECTION 621 – CRASH CUSHIONS

621.03 Construction Requirements.

A. Inertial Barrier System.

THE SECOND PARAGRAPH IS CHANGED TO:

Loose sand conforming to Subsection 901.10, Subpart C, shall be placed within each module to a depth recommended by the manufacturer. The sand shall have a dry density of 1.4 to 1.6 megagrams per cubic meter and a three percent maximum allowable moisture content. Five to seven percent of sodium chloride (NaCl) by weight shall be added and evenly dispersed throughout the sand to prevent freezing. Calcium chloride (CaCl₂) shall not be substituted for sodium chloride.

Instructions to Designers

Effective immediately, this revision shall be included in all Department projects which require use of Inertial Barrier Systems. The revisions will be incorporated by Department Specification Engineers responsible for preparing the Special Provisions, therefore, the designers need not insert these changes.

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