

**New Jersey Department of Transportation  
CORRECTIVE ACTION NOTICE**

CAN No. CAN051

**QUALITY MANAGEMENT SERVICES**

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Approved: B. Strizki  
Date: January 11, 2002

**Subject:** Use of Sound Absorptive Material on Noise Walls

**Bureau(s) Affected:** Division of Design Services; Division of Project Management; Bureau of Landscape and Urban Design; Bureau of Environmental Services; Bureau of Structural Engineering; Quality Assurance Review Section/In-House Production Teams

**Description of Issue(s):**

A quality issue pertaining to the sound absorptive material on existing noise wall installations has been reported to the Department. The issue was relayed to the Bureau of Quality Management Services by the Township of West Orange through the Division of Project Management. Reportedly, unsightly conditions exist along the westbound side of the I-280 corridor due to deterioration of the sound absorptive material on the lower portions of the noise walls. Preliminary investigation and observations revealed the following at the reported location:

- The sound absorptive facing is a perlite-like material, with roundish particles containing a little cement. This material is porous and soft and is crumbling and falling off the barrier.
- The deterioration that appears to be limited to the panel surfaces has been observed to be widespread from the ground upward to about four feet. The failures do not involve the underlying concrete.
- Damage is occurring in close proximity to the highway and deterioration is on the sunny side of the highway. The walls along the eastbound side, which are virtually always in the shade, have not experienced the same deterioration of the absorptive material.

A preliminary cost estimate that was performed to replace the damaged portion on the existing sound absorptive material along Rt. 280, resulted in a cost estimate of \$450,000.00. The cost is to repair only the damaged lower portions of the approximate ¼ mile barrier and includes traffic control. Two other existing noise barrier installations where sound absorptive facings were applied have been reported by Maintenance to be experiencing similar deterioration.

**Corrective Action Plan:**

The nature of this failure indicates that frequent exposure to chemical de-icers, freeze/thaw cycles, and possibly abrasion during snow plowing operations are the contributory factors to this condition. Based on the above and due to the potential costs associated with repairing and maintaining these walls: - all proprietary sound absorptive facings shall **not** be used on noise barrier installations and are banned until further notice.

The responsibility of each unit to ensure that this directive is carried out shall be as follows:

- Division of Project Management – Bureau of Environmental Services  
This unit is **not** to recommend the use of sound absorptive material on any project.
- Designers (Consultant/In-House Production Unit)

Designers are not to specify the use of sound absorptive coatings on any project in design, or on any other applicable projects as stated above.

- Division of Design Services / Quality Assurance Review Unit  
Quality Assurance Review Unit staff are responsible for ensuring that no sound absorptive coatings are specified on noise barrier projects under design, or on any future projects.
- Bureau of Structural Engineering  
This unit is responsible for preparing a Baseline Document Change Request to include instructions to Designers in Section 522 of the Standard Input (SI) informing them not to specify the use of sound absorptive coatings in accordance with the above.

Until these provisions are incorporated into Section 522 of the SI by the Configuration Management Unit of Quality Management Services, this Corrective Action Notice shall be in effect.

**Implementation: Immediately**