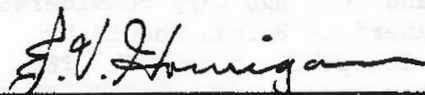


<b>TO:</b> <b>SUPERSEDED BY EI 95-053</b> <b>EFFECTIVE 3/21/96</b>	<h2 style="text-align: center;">ENGINEERING INSTRUCTION</h2> <p style="text-align: center;">NEW YORK STATE DEPARTMENT OF TRANSPORTATION</p> <p style="text-align: center;"><b>SUBJECT: TECHNICAL POLICY AND PROCEDURE MANUAL</b>  <b>USE OF SEALERS AND COATINGS FOR</b>  <b>PROTECTION OF STRUCTURAL CONCRETE</b></p> <p style="text-align: center;">Subject Code: 7.35-8-4</p>
<b>Distribution:</b> 30 Main Office      33 Regions      34 Special	<b>Code:</b> EI 82-73
<b>APPROVED:</b>  E.V. HOURIGAN, Deputy Chief Engineer (Structures)	<b>Date:</b> Dec. 28, 1982 <b>Supersedes:</b>

I. BACKGROUND

There is much advertising in technical literature and promotion of sealers and coatings for structural concrete by manufacturers and suppliers of construction materials. Such products are purported to seal the surface of the concrete or penetrate the concrete in such a way as to provide a physical or chemical barrier to prevent the intrusion of water and water-borne substances such as salt which are considered to be harmful to the concrete or the reinforcing steel in the concrete. Without a detailed investigation of each product, or family of products, those being asked to consider their use have found it difficult, if not impossible to determine if such products are of value, and if so, which are the best or most cost effective. Recognizing this, the Transportation Research Board authorized project 12-19A, which resulted in Report 244 - "Concrete Sealers for Protection of Bridge Structures" - dated December 1981. The researchers selected for this work carefully reviewed all types of products intended to protect structural concrete and thoroughly discuss their findings in the report. It is recommended that those concerned with the use of sealers and coatings read this report.

The information found in this report, along with other information gathered and evaluated by the Department, has led to the establishment of the following policy. This policy is based on the fact that structural elements constructed with good quality air-entrained concrete (water-cement ratio 0.46 or less), properly consolidated and cured, and with adequate cover over the embedded reinforcing steel, will provide long term, maintenance free service in normal environments.

II. POLICY

The use of concrete sealers or coatings for the protection of structural concrete shall be limited to the following applications.

- Abutment and pier surfaces, as directed by Note 36 of the notes to be placed on plans as found in Standard Details for Highway Bridges.

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- Structural concrete with deficiencies, such as low air content, may receive a sealer or coating as a remedial measure if ordered by the Deputy Chief Engineer (Construction).

### III. DETAILS

Because the effectiveness of sealers and coatings vary considerably depending on their composition, the Materials Bureau should be consulted for assistance in selecting acceptable products. The matter of using sealers and coatings for structural concrete in severe environments is under study in the Department, and this policy will be revised if necessary after this study is completed.