



To: SUPERSEDED BY <u>EB 06-057</u> EFFECTIVE 5/3/07		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 03-014
Title: 717-01 EPOXY RESIN PROTECTIVE COATINGS FOR CONCRETE			
Distribution: <input type="checkbox"/> Manufacturers (18) <input type="checkbox"/> Surveyors (33) <input checked="" type="checkbox"/> Main Office (30) <input checked="" type="checkbox"/> Consultants (34) <input type="checkbox"/> Local Govt. (31) <input type="checkbox"/> Contractors (39) <input checked="" type="checkbox"/> Regions/Agencies (32) <input type="checkbox"/> _____ ()	Approved:  Robert L. Sack, Deputy Chief Engineer, Technical Services Division <u>24 MAR 03</u> Date 		

ADMINISTRATIVE INFORMATION:

- **Effective Date:** This Engineering Instruction (EI) is effective immediately.
- **Superseded Issuances:** None.

PURPOSE: To disapprove Section 595, Protective Coatings for Concrete (already omitted from the 2002 *Standard Specifications*), and Section 717-01, Epoxy Resin Protective Coatings, from the 2002 *Standard Specifications*.

TECHNICAL INFORMATION:

1. MATERIALS SELECTION - Approved sealers: 717-03 Penetrating Type Protective Sealer or 717-04 Coating Type Protective Sealer.
2. REHABILITATION - Design may call for one of the following surface treatments. Additional guidelines are in the new *April 2002 Bridge Manual* (see Section 19.3.4).
 - A. Areas Previously Coated with an Epoxy Resin Protective Coating.
 (It is difficult to bond other coatings to epoxy coatings.)
 - Leave the repaired area as finished and apply a 717-03 Penetrating Type Sealer to the surface of the repair.
 - Coat the repaired area with a 717-04 Coating type Sealer (gray colored) to blend in. The color may be close, but not necessarily match.
 - Remove all the surrounding epoxy resin protective coating and apply a new Coating Type Sealer Protective (717-04) to the entire cleaned area. A 717-03 Penetrating Type Protective Sealer may be used if the repair color is similar.
 - B. Areas Never Coated with an Epoxy Resin Protective Coating.
 - Leave the repaired area as finished.
 - If the repair color is similar, apply a 717-03 Penetrating Type Protective Sealer to the surface of the repair, and the rest of the structural element if none was ever applied.
 - If the repair color is different and esthetics is an issue, apply a 717-04 Coating Type Protective Sealer to the surface of the repair, and all the rest of the structural element.
3. COST IMPACT. Neutral.

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IMPLEMENTATION:

- DQAB will remove Section 717-01 from the *2002 Standard Specifications* in the next update.
- Disapproved Items: 595.01 M - Epoxy Protective Coating
 08595.01mmn M - Epoxy Protective Coating
- The above surface treatment guidance will be inserted in the next update of the *Bridge Manual*.

BACKGROUND: The material specified by 717-01, Epoxy Resin Protective Coatings, and previously used under contract pay items in Section 595, prevent the evaporation of water from concrete. This can lead to freeze-thaw damage in the concrete. Department policy was set in 1995 with the issuance of EI 95-054, Specifications for Penetrating and Coating Type Sealers for Structural Concrete, and EI 95-053, Design Guidelines for the Use of Penetrating and Coating Type Sealers for Concrete. These sealers allow the concrete to breath by letting vapor escape, but prevent liquid water and harmful chemicals from entering.

CONTACT: Field Engineering 1 Section of the Materials Bureau at 518-457-5956.