

S U P P L E M E N T A L S P E C I F I C A T I O N

AMENDMENT TO SECTION 528 – PRESTRESSED CONCRETE MEMBERS

The purpose of this Supplemental Specification is to adopt the Surface Resistivity Test as a replacement for the Rapid Chloride Penetration Test for indicating permeability of concrete.

Amend 2.8.2 to read:

2.8.2 Mix Design. The Fabricator shall design and submit for approval the proportions and test results for a concrete mix which shall attain the following: a minimum design compressive strength as detailed on the plans for test cylinders sampled in accordance with the requirements of AASHTO T 141, molded and cured in accordance with the requirements of AASHTO T 23, and tested in accordance with the requirements of AASHTO T 22; a **surface resistivity greater than 15 kilohm-centimeter (kΩ-cm) at 56 days** using AASHTO TP 95. The minimum average compressive strength of the proposed mix shall be determined using the procedures in Appendix D. Air entrainment shall be targeted at a value of 6.0 percent +/-1.5 percent. Testing shall be in accordance with AASHTO T 119 and T 152.

Amend 3.1.4.3.4 to read:

3.1.4.3.4 Surface Resistivity testing may be completed by the Bureau of Materials & Research in accordance with AASHTO TP 95 at an age of 56 days or later. The Fabricator shall obtain **one** additional core from the web of the girder test section and submit the cores to the Bureau of Materials & Research for permeability testing. The Fabricator shall also submit **one** additional match cured cylinder from the test placement to the Bureau of Materials & Research for permeability testing.

Amend 3.1.4.3.6 to read:

3.1.4.3.6 Test Section Exemption. Fabricators having proven experience with the mix design submitted for use, in precast/prestressed bridge member applications, shall be exempt from the test section placement, as approved by the Department. Proven experience will be determined by the Bureau of Materials and Research based on submission of satisfactory test results using a particular mix design that meets or exceeds the following criteria in a similar fabricated bridge member or a similar 10 foot long bridge member test section:

Compressive Strength (as specified in 3.1.4.3.5)
Surface Resistivity (as specified in 2.8.2)
Air content (as specified in 3.1.4.3.1 or higher)
Slump of the concrete (as specified in 2.8.2)

Approval to proceed to member fabrication will be provided by the Bureau of Materials and Research and shall be contingent on review and approval of the submitted test results.

Replace 3.1.6 with the following:

3.1.6 Member Concrete Permeability Testing.

3.1.6.1 Surface Resistivity testing may be completed on all members types by the Bureau of Materials & Research in accordance with AASHTO **TP 95** at an age of 56 days or later. The Fabricator shall submit **one** match cured cylinder from each bed cast to the Bureau of Materials & Research for permeability testing.

3.1.6.2 Acceptance of the concrete within each bed cast will be based on successfully achieving the **minimum** average **surface resistivity** value of **15 k Ω -cm** at 56 days for **one** match cured quality assurance cylinder.