Amend Section 90-1.01, "Description," and Section 90-2.01, "Cement," of the Standard Specifications to require:

Concrete shall be proportioned to conform to the following shrinkage limitations when tested in conformance with the requirements of AASHTO Designation: T 160, modified as follows:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Maximum Shrinkage of Laboratory Cast Specimens at 28 days Drying (average of 3, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paving and approach slab concrete</td>
<td>0.050</td>
</tr>
<tr>
<td>Bridge deck concrete</td>
<td>0.045</td>
</tr>
</tbody>
</table>

Note: Shrinkage requirement is waived for concrete that is used for precast elements.

Shrinkage tests shall be either:

A. Performed by a laboratory accredited to perform AASHTO Designation: T 160, or
B. Performed by a laboratory that maintains a current rating of 3 or better for the Cement and Concrete Reference Laboratory (CCRL) concrete proficiency sample program.

Laboratory cast specimens shall have a 4" x 4" cross section. Specimens shall be removed from the molds 23 ± 1 hour after mixing the concrete and placed in lime water at 73 ± 3°F to 7 days’ age. A comparator reading shall be taken at 7 days’ age and recorded as the initial reading. Specimens then shall be stored in a humidity controlled room maintained at 73 ± 3°F and 50 ± 4 percent relative humidity for the remainder of the test. Subsequent readings shall be taken at 7, 14, 21, and 28 days’ drying.

Test data verifying conformance to the shrinkage limitations shall be submitted with the mix design. Shrinkage testing data accepted by the Engineer no more than 3 years prior to the first working day of this contract will be acceptable for this entire contract, provided the data was for concrete with similar proportions and the same materials and material sources to be used on this contract. Concrete shall be considered to have similar proportions if, when compared to concrete to be used on this project, no more than 2 mix design elements are varied. Varied mix design elements shall fall within the tolerances in the following table:
Mix Design Element                          | Tolerance (±)
---|---
Water to cementitious material ratio     | 0.03
Total water content                      | 5 %
Coarse aggregate (weight per cubic yard) | 10 %
Fine aggregate (weight per cubic yard)   | 10 %
Supplementary cementitious material content | 5 %
Admixture (as originally dosed)       | 25 %

Note: Admixtures must be of the same brand.

Portland cement shall conform to the requirements in ASTM Designation: C 150 except the C₃S content of Type II cement shall not exceed 65 percent.

There will be no cost to the State, and no time adjustment by reason of this change.