SECTION 601 – STRUCTURAL CONCRETE

Make the following amendments to said Section:

(I) Amend Subsection **601.03(B) Design and Designation of Concrete** by revising the first sentence of the sixth paragraph at lines 63 and 64 as follows:

"Use Type SBD concrete where specified."

(II) Amend Subsection **601.03(B) Design and Designation of Concrete** by adding a new Subsection 601.03(B) (3) Concrete Type SBD after line 145 as follows:

"601.03(B) (3) Concrete Type SBD. This concrete shall be used where specified. Special requirements are listed below.

A shrinkage reducing admixture (SRA), Tetraguard AS20 by BASF or Eclipse by W.R. Grace & Co., or approved equal shall be added to the concrete. The minimum dosage requirement shall be 128 ounces per cubic yard of concrete.

A migrating corrosion inhibitor amine carboxylate water-based admixture shall be added to the concrete. The minimum dosage shall be 1.5 pints per cubic yards of concrete.

The concrete shall have a maximum water to cement ratio of 0.40. The weight of the SRA shall be included in the total water when computing the water to cement ratio. The maximum weight of water including the SRA per cubic yard of concrete shall be 300 pounds.

The concrete shall have a maximum shrinkage strain of .00006 at 28 days and .000145 at 56 days according to ASTM C512.

The 28 day compressive strength of the concrete shall be not less than 6000 psi.

The concrete shall contain synthetic structural fibers and synthetic monofilament polypropylene fibers conforming to ASTM C 1116 and ACI 544.

The concrete shall be designed with an air content between 4% and 7%. The air entrainment admixture (AEA) shall not be a surfactant or a synthetic detergent. The AEA shall be formulated with polymers that are chemically stable and inert. Special equipment shall be used to produce evenly-sized and evenly-dispersed air bubbles that do not react with other ingredients or decay with

agitation. The air bubbles shall be produced before the concrete is placed into the mixer or ready-mix truck.

A trial Type SBD concrete pour 20'-0" long, 20'-0" wide and 10" thick shall be constructed under the following conditions:

(a) All equipment, methods, and concrete in the trial pour shall be identical to those used during the construction where specified.

(b) Equipment noted above shall include concrete pumps, vibrators, finishing tools, finishing aids, evaporation retarders and curing compound.

(c) No additional water shall be added to the trial pour surface in an effort to aid the finishing operation.

(d) *No reinforcing steel or tining are required for the trial pour.*

(e) The trial pour costs shall be incidental to the bridge deck concrete."

The final concrete mix design shall be based on field trial batches to determine the most suitable materials and proportions that will provide a concrete mixture having the least amount of segregation and bleeding, and at the same time provide the necessary workability to meet placing requirements."

(III) Amend Subsection **601.03(F) Consistency** by revising the slump for Bridge Decks in Table 601.03-3 at line 506 as follows:

"Nominal Slump shall be between 6 to 8 inches and maximum slump shall be 9 inches."

END OF SECTION 601