

ALABAMA DEPARTMENT OF TRANSPORTATION

DATE: August 10, 2018

Special Provision No. 18-0399

EFFECTIVE DATE: January 1, 2019

SUBJECT: Bridge Concrete.

Alabama Standard Specifications, 2018 Edition, SECTION 510 shall be modified as follows:

SECTION 510 BRIDGES

510.03 Construction Requirements.

(c) Superstructures.

1. General.

Item 510.03(c)1 shall be replaced with the following:

1. General.

No superstructure load shall be placed upon finished piers or abutments until directed. Moreover, before any superstructure load is placed on concrete portions of a substructure, one of the following shall be accomplished: (1) A minimum time of 14 days, exclusive of days where four hours or more the temperature is below 40 °F {5 °C}, shall be allowed for the hardening of concrete, or (2) the concrete shall indicate a development of minimum compressive strength of 2800 psi {19 MPa} from cylinders prepared in conformity with AASHTO T 23.

6. Reinforced Concrete Bridge Decks.

b. Placing Concrete.

Subitem 510.03(c)6b shall be replaced with the following:

b. Placing Concrete.

In addition to the requirements given in Section 501, the following shall also apply. The rate of pour shall be controlled so that all concrete between construction joints can be placed and compacted in a continuous operation before initial set takes place in contiguous portions of the concrete. In case of breakdown of equipment or other reasons necessitating suspension of placing and compacting the concrete for a period in excess of 45 minutes for mixes without retarders or 60 minutes for retarded concrete, and part of the work involved is such that a construction joint will not be permitted, all of the previously placed concrete in that section shall be removed and replaced by the Contractor without extra compensation.

A deck pour shall not be started when it is raining or threatening rain. Should inclement weather develop during the pour, it will be the Contractor's responsibility to protect the plastic concrete so that placing and finishing operations can be satisfactorily completed without damage to the concrete or concrete surface. Should damage occur, the concrete shall be removed and replaced at the Contractor's expense. The placing of skin patches (the scabbing on of the concrete or grout) on a bridge deck will not be permitted.

All concrete deck slabs shall be placed full thickness in one operation. Unless otherwise shown on the plans, on R.C.D.G. spans, concrete in the girders and slab shall be placed in one operation.

Webwalls may be poured and allowed to set up prior to pouring the bridge deck. If a longitudinal screed is to be used for finishing the concrete in the bridge deck, the concrete for the bridge deck shall not be placed until the webwall concrete has reached a minimum compressive strength of 2800 psi {19 MPa} as determined from the testing of cylinders.

On all continuous spans, a pouring sequence will be shown on the plans. All lower numbered or lettered pours shall be made prior to proceeding to the next higher numbered or lettered pour. Adjacent pours shall not be made until after the previously placed concrete has reached an age of 24 hours.

Simple spans shall be constructed in one pour, except on simple spans over 50 feet {15 m} in length transverse slab construction joints will be permitted. On simple spans over 80 feet {25 m}, transverse slab construction joints will be required. Where slab construction joints are used on simple composite spans, construction joints shall be placed at approximately the quarter points of the span; after pouring the center portion of the span and when the concrete has reached a compressive strength of 2400 psi {17 MPa} by cylinder tests, or after four days, the end slab portions of the span may be poured.

Consideration will be given to reducing the number of construction joints specified above where transverse screeding is to be employed; however, all requests for changes to pouring sequences must be submitted in writing to the Construction Engineer for approval. If the number of construction joints is reduced, a minimum pour rate of 30 cubic yards {23 m³} per hour may be required, and an approved retarder may be required in the deck concrete.

During the placing operation, the concrete shall be placed in strips just ahead of the screed for the entire length or width of the pour, whichever applicable. A small roll of grout shall be kept on the leading edge of the screed so that all depressions ahead of the screed will be filled.

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