

MDOT BRIDGE DECK CONSTRUCTION INSPECTION CHECKLIST 0395

CONTROL SECTION	PROJECT NUMBER	DATE
STRUCTURE NUMBER	STRUCTURE LOCATION	
CONTRACTOR		CONCRETE SUPPLIER
INSPECTOR		ENGINEER

A. Prior to Hydrodemolition

Initials

- Contractor submitted Concrete QC plan for subsection 1002.03.B.
- Concrete Supplier and Contractor Concrete Testing Personnel identified.
- Generate random numbers for concrete quality assurance sampling.
- Approved Concrete Mix Design(s) submitted, including Aggregate Correction Factor.
- Contractor to submit deck lighting scheme for approval 706.03.I.2.
- Contractor to submit for approval of equipment to be used to determine relative humidity and wind velocity at site per subsection 706.03.H.2.

B. Prior to Pour

- Inspect forms and check for grade, straightness, tightness, and location 706.03.D. Review approved stay-in-place forms and shop drawings prior to installation.
- If using metal stay-in-place forms ensure that Styrofoam is in the corrugations and secured (if required). Ensure ¼ inch weep holes are drilled 12 inches on center along transverse and longitudinal construction joints 706.03.D.4.
- Ensure the epoxy coated steel reinforcement is properly stored and covered prior to placement to prevent damage from sunlight 706.03.E.1.
- Inspect steel reinforcement, including bar chair location and spacing 706.03.E.4.
- Verify bar size, quantity, location, spacing, clear cover, laps, and ties of transverse, longitudinal and vertical steel reinforcement. All bars must be tied in accordance with subsection 706.03.E. Record quantities on Form 1138, Bridge Reinforcing Computations.
- Repair epoxy coated re-steel per subsection 706.03.E.8. Verify product on the Qualified Product List per subsection 905.03. Record product on IDR.
- Ensure the bridge deck is free from debris per subsection 706.03.H.1. Verify that quality assurance testing personnel are on site to perform verification testing.
- Ensure the bulkhead for construction joints are in place, secure, and at the correct grade. Check contractor's grades and verify during the dry run.
- Ensure vibrators have rubber coated heads per subsection 706.03.H.1.
- Perform dry run per subsection 706.03.M.1 and record wet depth measurements on Form 1131, Bridge Decks Contract Depth Measurement, and note locations. Saw cut bulkheads after dry run approval.
- Ensure contractor furnishes a 10-foot straight edge per subsection 706.03.M.1.
- Ensure the burlap has been soaking a minimum of 12 hours before the pour, per subsection 706.03.N.1.b and excess water has been removed.

Initials

- Ensure the equipment to determine relative humidity, temperature, and wind velocity is on site and working properly. Record evaporation rate on Form 1174S, Inspector's Report of Concrete Placed (Figure 706-1).
- Ensure the equipment for applying curing compound is in working condition.
- Issue Form 1125, Permit to Place.

C. During the Pour

- Record Aggregate Correction Factor on Form 1174S, Inspector's Report of Concrete Placed.
- Ensure contractor is performing QC testing, including yield tests.
- Complete Form 1174S, Inspector's Report of Concrete Placed.
- Verify concrete delivery tickets match the concrete mix design.
- Perform concrete QA testing.
- Ensure engineer tags the quality assurance cylinders.
- Test concrete at the pump discharge and the concrete truck, according to 12SP604(B) QUALITY CONTROL AND ACCEPTANCE OF PORTLAND CEMENT CONCRETE.
- Record elapsed time interval on every delivery ticket between charging the mixer and the placement of the concrete. Sign the concrete delivery tickets.
- Vibrator with rubber coated heads being used within 15 minutes of placement.
- Ensure contractor does not over vibrate or over finish the concrete.
- Ensure concrete does not freefall more than 6 inches to the top mat deck reinforcement.
- Ensure a sufficient head of concrete is maintained in front of the finishing machine to provide mix consistency during placement.
- Perform wet depth checks near locations of the dry run checks and record measurements on Form 1131, Bridge Decks Concrete Depth Measurement.
- Ensure contractor checks deck tolerance with a 10-foot straight edge both longitudinally and transversely. Address deficiencies greater than 1/8 inch in any 10 feet.
- Do not allow the contractor to apply water to the deck surface to aid in finishing. If necessary, allow only with an approved fog sprayer and only when approved by the engineer.
- Inspect texturing per subsection 706.03.M.
- Verify the white curing compound was applied at the appropriate time and at the correct application rate.
- Verify the wet cure (burlap, soaker hoses, and polyethylene) was applied at the appropriate time.
- Verify the low temperature protection was applied as necessary per 706.03.J2.b.

D. After the Deck Pour

- Ensure that the contractor waits a minimum of 15 hours to strip bulkheads after completion of the pour.
- Do not allow casting of succeeding structure portions, that are placed on top of the bridge deck, until the deck concrete has wet cured for 7 days. Saw cut construction joints within 24 hours after the deck pour. Inspect deck tolerance 1/8 inch in 10 feet with 10-foot straight edge prior to acceptance.