New Jersey Department of Transportation
1035 Parkway Avenue, PO Box 600, Trenton, New Jersey 08625-0600

Baseline Document Change Announcement

ANNOUNCEMENT: BDC17S-06

DATE: August 15, 2017

SUBJECT: Temporary Sheeting Limit and Miscellaneous

- **Revisions to Subpart/Subsections 501.04, 903.05.02, 903.05.04, 908.02.01, 908.02.02, & 911.02.02 and addition of new Subsection 913.04 to the *2007 Standard Specifications for Road and Bridge Construction*.**

Subsections 501.04, 903.05, 908.02 & 911.02 have been revised and Subsection 913.04 has been added to the 2007 Standard Specifications for Road and Bridge Construction.

The revisions are as follows:

1. Subsection 501.04: Added a statement requiring a 3 feet limit of fill for Temporary Sheeting.
2. Tables 903.05.02-1 & 903.05.04-1: Replaced the term "Chloride Permeability Test" with the "Surface Resistivity Test" for High Performance Concrete.
3. Subparts 908.02.01, 908.02.02 & 911.02.02: Changed the requirements for high strength steel bolts from ASTM A325 and ASTM A490 to new ASTM F3125 specifications.
4. New Subsection 913.04: Added material and coating requirements for box beams.

The following revisions have been incorporated into the Standard Input, 2007 as of August 15, 2017.

501.04 MEASUREMENT AND PAYMENT
THE FOLLOWING IS ADDED AFTER THE LAST PARAGRAPH:

The Department will measure the square footage of TEMPORARY SHEETING by multiplying the average height and length of sheeting that is driven. The Department will determine the average height by extending a line from the bottom of the excavation in cuts or the existing ground line in fills to a vertical plane of the top of sheeting, not to exceed 3 feet above finished grade.

903.05.02 Mix Design and Verification
THE ENTIRE TABLE 903.05.02-1 IS CHANGED TO:

Table 903.05.02-1 Design and Verification Requirements for HPC

		Requirements	
Performance Characteristic	**Test Method**	**HPC-1**	**HPC-2**
Scaling Resistance[1]@ 50 cycles (visual rating of the surface, maximum)	ASTM C 672	3	–
Abrasion Resistance	ASTM C 944	–	0.04

(average depth of wear in inches, maximum)			
Freeze-Thaw Durability (relative dynamic modulus of elasticity after 300 cycles, minimum)	ASTM C 666 Proc. A	80%	80%
Surface Resistivity[2] @ 56 days (kΩ-cm, minimum)	AASHTO T 358	36	36
Compressive Strength[3] @ 56 days (pounds per square inch, minimum)	AASHTO T 22	5400	5400
Water-Cement Ratio (maximum)	–	0.40	0.40

1. For the scaling resistance testing, moist cure specimens for 14 days and then air cure for 14 days.
2. If the surface resistivity requirement has been achieved in 28 days, consider the surface resistivity acceptable. If the required surface resistivity is not achieved in 28 days, test the HPC sample at 56 days.
3. If the compressive strength requirement has been achieved in 28 days, consider the strength acceptable. If the required compressive strength is not achieved in 28 days, test the HPC samples at 56 days.

THE THIRD PARAGRAPH IS CHANGED TO:

In addition to verifying the compressive strength of the HPC mix, the ME will verify the surface resistivity according to AASHTO T358. Submit 4 additional cylindrical samples, having a 4 inch diameter and a length of at least 8 inches, to the ME for this verification testing. The ME will average the values of tests on 2 specimens for each mix design.

903.05.04 Control and Acceptance Testing Requirements

THE ENTIRE SUBPART IS CHANGED TO:

With the exception that the ME may perform compression testing at 56 days, the ME will enforce the requirements specified in 903.03.05 for control and acceptance testing of non-pay adjustment Class A concrete in the fabrication of the HPC elements.

Produce HPC that conforms to the acceptance testing criteria in Table 903.05.04-1.

Table 903.05.04-1 Acceptance Requirements for HPC

Performance Characteristic	Test Method	Requirement
Percent Air Entrainment[1]	AASHTO T 152	6.0 ± 1.5 (No. 57/67 Aggregate) 7.0 ± 1.5 (No. 8 Aggregate)
Slump (inches)[1, 2]	AASHTO T 119	3 ± 1
Surface Resistivity @ 56 days[3, 4] (kΩ-cm, minimum)	AASHTO T 358	19
Compressive Strength @ 56 days[5] (pounds per square inch, minimum)	AASHTO T 22	4400

1. If using a Type F or G admixture, change the Slump and Air Content values for the HPC as follows:
   1.1 Slump: 6 ± 2 inches
   1.2 Air Content: increase both the target value and tolerance percentages by 0.5
2. For slip-formed parapet, design and produce a mix with a slump of 1 ± 1/2 inch.
3. The ME will not test for the surface resistivity requirements for HPC used for Items other than bridge decks.
4. For surface resistivity, the ME will mold 4 additional cylinders, taking 2 cylinders each from 2 randomly selected delivery trucks for testing at 56 days.
5. For compressive strength testing, the initial rate for the HPC is 6 per lot. The retest limit is 4400 pounds per square inch.

The ME will test 2 specimens for surface resistivity and will average the results of the 2 specimens to determine the test result. The ME will perform 2 tests on each lot from samples taken from 2 randomly selected delivery trucks. The lot is eligible for 100 percent payment provided that the test results are equal to or above 19 kilo-ohm centimeter.

If, upon testing at 56 days, 1 or more individual test results is below 19 kilo-ohm centimeter, the RE may do one of the following:

1. Require that the Contractor remove and replace the defective lot.
2. Allow the Contractor to submit a corrective action plan for approval.

908.02 HIGH-STRENTH STEEL BOLTING MATERIALS

908.02.01 Material Requirements
THE FIRST PARAGRAPH IS CHANGED TO:

For structural steel erection and for steel to steel chord splices of sign structures, using high-strength steel bolts, including nuts and plain hardened washers according to ASTM F 3125, Grade A 325 or Grade A 490.

THE THIRD PARAGRAPH IS CHANGED TO:

Use ASTM F 3125, Grade A 325, Type 3 high-strength steel bolts for bolting unpainted corrosion resistant (weathering) steel.

908.02.02 Sampling and Testing Requirements for Bolt Assemblies

B. Tensile, Proof Load, Hardness, and Coating Thickness Tests.
THE FIRST PARAGRAPH IS CHANGED TO:

For each lot, the manufacturer shall perform tensile, proof load, and hardness tests and shall measure galvanized coating according to ASTM F 3125, Grade A 325.

911.02.02 Breakaway Sign Supports for Ground Mounted Signs
THE ENTIRE SUBPART IS CHANGED TO:

Fabricate and construct breakaway sign supports for ground mounted signs using materials conforming to the requirements in Table 911.02.02-1.

Table 911.02.02-1 Materials for Breakaway Sign Supports

Item	Test Method	Type or Grade	Galvanizing
Aluminum Materials (other than bracket)	911.01.01		
Bracket	B308	6061-T6	
Structural steel shapes	ASTM A709	Grade 36	ASTM A123
Steel Sheet	ASTM A1011	Grade 36	ASTM A 653
Bolts (except special bolt for coupling)	ASTM F3125	Grade A 325	ASTM A153
Special bolt for coupling	ASTM A449		ASTM A153
Cap Screw	ASTM A307		ASTM A153
Lock Washer	ANSI B18-21-1		ASTM A153
Nut	ASTM A563	Grade DH	ASTM A153
Coupling	AMS 6378 F		ASTM A153
Steel Hinge Plate	AISI 4130		ASTM 123
Anchor Rod	AISI 1045		
Anchor Coil	AISI 1008		
Anchor Washer	908.04		
Anchor Ferrule	908.04		

Submit mill certificates for the component materials.

THE FOLLOWING SUBSECTION IS ADDED

913.04 BOX BEAM FOR CONSTRUCTION BARRIER CURB

Ensure that the box beam is made of cold-formed welded and seamless structural tubing. Ensure that the box beam conforms to ASTM A500, Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes, Grade B.

Ensure that the box beam is tested in accordance with ASTM E436 on a 2 x 9 inch galvanized specimen at -0.4 °F and provide certified test result to the ME.

The Department will reject the material if the average percent shear area falls below 50.

Ensure that the identification number/information is placed on the material at an interval of 4 feet or less.

Ensure plates conform to ASTM A36 and are galvanized according to ASTM A123.

Ensure that the box beam is galvanized in accordance with ASTM A123. Fasteners are galvanized and conform to the following unless specified otherwise in the contract documents:

1. Bolts: ASTM A307 Grade A.
2. Nuts: ASTM A563 Grade A.
3. Washers: ASTM F844.
4. Hot Dip Galvanizing: ASTM A153.

Implementation Code R (ROUTINE)

Changes must be implemented in all applicable Department projects scheduled for Final Design Submission at least one month after the date of the BDC announcement. This will allow designers to make necessary plan, specifications, and estimate/proposal changes without requiring the need for an addenda or postponement of advertisement or receipt of bids.

Recommended By:

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PS: KS: YK