New Jersey Department of Transportation
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Baseline Document Change Announcement

Bridges and Structures

BDC11S-03

November 15, 2011

SUBJECT: Revision to subsections 102.04, 505.03, 506.03, 509.03, and 554.04 of the 2007 Standard Specifications for Road and Bridge Construction

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Subsection 102.04 and various Subparts of Division 500/550 (505.03.01, 506.03.01, 506.03.02, 507.03.02, 509.03.02, and 554.04) of the 2007 Standard Specifications for Road and Bridge Construction have been revised.

The details of the revisions are as follows:

102.04:	The Designers must list the structures and locations of existing lead paint.
505.03.01 & 506.03.01:	Requires the submission of Working Drawings for certification and added "Temporary bracing" to the list. Also, Specifications for the DTI's have been reorganized and updated based on current construction practices.
506.03.02 & 507.03.02:	Minor corrections have been made.
509.03.02:	A reference to Section 605 has been removed. New Specifications for Bridge chain-link fence have been developed.
554.04:	Has been revised to state that the "overhead and profit" will not be paid for the Testing, If and Where Directed item.

The following revisions have been incorporated in Standard Input, SI2007 as of November 15, 2011.

102.04 Examination of Contract and Project Limits
THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

The structures and the location(s) of lead paint, if any, are listed in the Special Provisions.
1**********1
COMPLETE AND INCLUDE FOLLOWING INFORMATION

The following is a list of structures and the location(s) of lead paint:

Structure #/Location	**Lead Paint Location(s)**

1**********1

505.03.01 Prestressed Concrete Structures

C. Erection Plan.
THE FIRST SENTENCE IS CHANGED TO:

Submit working drawings for certification regarding the plan of operations to the RE at least 30 days before the pre-erection meeting.

506.03.01 Structural Steel

B. Erection Plan.
THE ENTIRE TEXT IS CHANGED TO:

At least 30 days before the pre-erection meeting, submit working drawings for certification regarding the plan of operations to the RE. Include, at a minimum, the following in the plan:

1. Number and type of manpower and equipment.
2. Shipping procedures.
3. Lifting procedures.
4. Beam erecting sequence, including method of setting bearings and diaphragms.
5. Temporary bracing.
6 Manufacturer's recommendations.
7. Procedures for employee safety.
8. Traffic control and protection.

E. Installing High-Strength Steel Bolts.
THE ENTIRE TEXT IS CHANGED TO:

Check galvanized bolts and nuts to verify that a visible lubricant is on the threads. Check black bolts and nuts to verify that they are oily to the touch.

Before beginning bolt installation, provide on the project site a Skidmore-Wilhelm calibrator or an acceptable equivalent tension measuring device. Ensure that the manufacturer's representative is present during the first full day of tensioning work to provide technical assistance.

Test assemblies as follows:

1. For bolt assemblies that do not require Direct Tension Indicators (DTI's), perform the rotational capacity test in accordance with 908.02.02.C, on 2 assemblies from each rotational-capacity lot.

2. For bolt assemblies requiring DTI's, install in accordance with the following, and perform the rotational-capacity test as specified in NJDOT S-3 on 3 assemblies from each rotational-capacity lot.

   Ensure that the bolt, nut, and washer are from the same rotational-capacity lot. If the DTI is used under the nut, place an additional washer between the nut and the protrusions on the DTI. If recommended by the bolt manufacturer, the Contractor may use wax lubricant, beeswax, or a water wax emulsion to aid in installation. Hold the bolt head stationary while tightening the nut.

Install bolts in all of the holes of the connection and tighten to a snug-tight condition to compact the joint. Ensure that the number of spaces on DTIs in which a 0.005-inch feeler gauge is refused after snugging does not exceed the maximum snug-tight refusals as specified in Table 506.03.01-1. If the number of refusals exceeds the maximum, remove the assembly, insert a new DTI, and resnug.

Tighten the assemblies successively from the most rigid part of the connection to the free edges by turning the nuts while holding the bolts stationary. Tension the assemblies until the number of spaces in which the 0.005-inch thickness gauge is refused meets or exceeds the minimum final tension refusals specified in Table 506.03.01-1.

Table 506.03.01-1 Criteria for DTI Spaces for A 325 Bolts

Bolt Diameter, Inches	**1/2**	**5/8**	**3/4**	**7/8**	**1**	**1-1/8**	**1-1/4**	**1-3/8**	**1-1/2**
Number of Spaces on DTIs	4	4	5	5	6	6	7	7	8
Maximum Snug Tight Refusals[1]	1	1	2	2	2	2	3	3	3
Minimum Final Tension Refusals[2]	2	2	3	3	3	3	5	6	7

1. If the DTI is coated and under the nut, the maximum snug tight refusals is the number of spaces on the DTI minus one.
2. If the DTI is coated and under the nut, the minimum final tension refusals is the number of spaces on the DTI.

If an assembly is tightened so that there are no visible gaps remaining in any of the spaces on the DTI, the assembly has been over-tightened. Remove and replace over-tightened assemblies.

If assemblies do not meet the above rotational capacity requirements when tested at the work site, the Contractor may clean and relubricate the bolt assemblies in the rotational-capacity lot. After cleaning and relubricating, retest the assemblies for compliance to the above rotational capacity requirements.

For painted steel, apply 3 coats of an organic paint system, supplied by the same manufacturer as the originally applied inorganic zinc system, to the field bolted connections.

506.03.02 Bearings

C. Installing Bearings. Install bearings as follows:

1. Anchor Bolts.

THE SECOND SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

If using anchor bolt sleeves, ensure that they are circumferentially corrugated and are galvanized steel or plastic.

507.03.02 Constructing Bridge Decks

A. Forms. Construct forms as follows:

2. Removable Forms.

THE FOLLOWING IS ADDED:

Construct removable forms as specified in 504.03.02.B. Do not use shoring to support stringers along the span length where the superstructure, under live load and impact loads, is designed for composite action. Do not weld attachments required for placement of the removable forms to the beam.

L. Saw Cut Grooved Surfacing.

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Do not saw cut until after the Department performs Acceptance Testing as specified in Subsection 507.03.02 N.

N. Concrete Deck Surface Requirements

1. Acceptance Testing.

THE FIRST PARAGRAPH IS CHANGED TO:

Construct deck slabs so that less than 9 percent of the measured length of the lot exceeds 1/8 inch tolerance in 10 feet. The ME will test the surface of concrete bridge deck slabs with a Class I Walking Profiler prior to the

performance of saw cut grooved surfacing. The ME will calculate the percent defective using a rolling straight edge simulator analysis of the profiler data.

509.03.02 Chain-Link Fence for Bridge
THE ENTIRE SUBPART IS CHANGED TO:

At least 30 days before beginning the work, submit working drawings for certification. Indicate material specifications for adhesive, anchors, washers, and nuts on the working drawings.

Base the design embedment of the adhesive anchor bolts on a concrete compressive strength of 4000 pounds per square inch. Ensure that the embedment depth of the adhesive anchors shown on the working drawings is sufficient to obtain the required pullout strength as required for the proof load testing as specified in 908.01.04.

Do not use expansion type anchor bolts. Place anchors using one of the following:

1. **Cast-in-Place Type.** Set anchor bolts before placing concrete using a rigid template for each anchor assembly. When placing concrete, ensure that bolts do not move and spacing is maintained between the rigid templates. Ensure that the exposed threaded ends of the anchor bolts remain clean and protected from concrete. Clean the anchor bolts before installing the specified hardware.
2. **Adhesive Type.** Do not drill for installation until the concrete has cured for at least 14 days. Install adhesive anchors according to the manufacturer's recommendations. When drilling, ensure that spalling does not occur and existing utilities are not damaged. Repair damage to the existing concrete, utilities, and reinforcement steel as a result of drilling. Clean and dry drill holes before and during installation of the adhesive anchors.

Erect fencing as shown on the Plans.

554.04 MEASUREMENT AND PAYMENT
THE SECOND PARAGRAPH IS CHANGED TO:

The Department will base payment for TESTING, IF AND WHERE DIRECTED on the actual cost as evidenced by paid receipts from the testing laboratory.

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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Walter McGrosky
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