

**KANSAS DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION TO THE  
STANDARD SPECIFICATIONS, EDITION 2015**

Delete SECTION 1615 and replace with the following:

**SECTION 1615**

**ANCHOR BOLTS FOR STRUCTURAL USES**

**1615.1 DESCRIPTION**

This specification governs the threaded and non-threaded fastener components utilized for anchoring structural components to a concrete foundation or base.

**1615.2 REQUIREMENTS**

**a. General.** Fastener components and coatings governed through this specification must comply with **subsection 1615.2b** unless specified otherwise in the Contract Documents.

**b. Material Specifications.**

(1) Provide externally threaded steel anchor bolts (including permitted grades and styles of nuts, and hardened washers) that comply with AASHTO M 314. The bolt strength grade and size will be shown in the Contract Documents. Provide rolled threads for all applications except for bridge bearing application where cut threads may be utilized as an option. Provide non-threaded anchor bolts that comply with the applicable sections of M 314.

(2) If no coating process is specified in the Contract Documents, furnish either a hot-dip coating or a mechanically deposited coating satisfying the requirements of AASHTO M 314.

Note: Steel-to-steel thread engagement is reduced between bolt and nut when the nut is tapped oversize. Nuts zinc-coated then tapped oversize will have a lower tensile capacity than nuts not tapped oversize. To conform to the nut proof load requirements of ASTM A 563, Table 3, provide bolt and nut threads that fully conform to the requirements, including all referenced standards, of AASHTO M 314.

(3) Swedged anchor bolts shall conform to the above requirements. In addition, provide deformations for swedged anchor bolts that comply with the following requirements.

- Depth - no more than 1/8 inches.
- Radius – not less than ½ inches.
- No more than one deformation occurring in any plane perpendicular to the shaft of the bolt.
- At least one deformation within each 1-inch length of bolt.
- Adjacent deformations shall be out of phase by a minimum of 90 degrees.

**1615.3 TEST METHODS**

Conduct all tests required by the applicable AASHTO, ASTM, ASME, ANSI, or other component or material specifications of **subsection 1615.2b**. Measure the coating thickness by any one of the methods specified in ASTM B 633 and by eddy current methods, ASTM B 244, provided that appropriate calibration procedures and standards have been applied. The magnetic induction and eddy current methods are nondestructive in nature and are preferred. Destructive techniques, i.e., coating removal, may be utilized as referee methods.

**1615.4 PREQUALIFICATION**

Not applicable.

**1615.5 BASIS OF ACCEPTANCE**

Submit for approval a Type A certification (certified mill test report), as specified in **DIVISION 2600**, for all fastener components.

In the event the certification requirements described in the previous paragraph cannot be complied with, submit samples representative of the lot(s) and heat(s) of the components and materials provided to the Engineer of Tests for testing. These samples must comply with **subsection 1615.2**, including the proof load requirements of ASTM A 563.

Inspection by field personnel of all fastener components for compliance with corrosion protection and dimensional requirements.

The final disposition of fastener components will be completed at the final destination as the result of inspection for the quality of workmanship, the delivery condition.

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