

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

Delete SECTION 1603 and replace with the following:

**SECTION 1603**

**STEEL WIRE & WELDED WIRE FABRIC FOR CONCRETE REINFORCEMENT**

**1603.1 DESCRIPTION**

This specification governs the welded wire fabric for concrete reinforcement that is produced from deformed or non-deformed steel wire, or a combination thereof.

**1603.2 REQUIREMENTS**

**a. General.**

(1) Any plant producing steel wire, welded wire fabric, or both for concrete reinforcement through this specification must be currently prequalified. A plant is any facility that only produces wire or welds the internally produced or externally sourced wire into fabric.

(2) The fabric provided through this specification can be produced from deformed or non-deformed wire, or a combination of both, unless specified otherwise in the Contract Documents.

(3) The fabric is to be produced to the dimensions and sizes as specified the Contract Documents. Deviations from this requirement must have the documented approval of the Engineer's representative.

**b. Material Specifications.**

	<b>AASHTO</b>	<b>ASTM</b>
• Non-deformed steel wire .....	M 32	A 1064
• Deformed steel wire .....	M 225	A 1064
• Fabric produced from non-deformed steel wire	M 55 .....	A 1064
• Fabric produced from deformed wire or a combination of deformed and non-deformed wire .....	M 221	A 1064

**1603.3 TEST METHODS**

Conduct all tests in accordance with the applicable AASHTO or ASTM specifications referenced in subsection 1603.2b.

**1603.4 PREQUALIFICATION**

Effective March 1, 2019, all plants producing steel wire, welded wire fabric, or both must comply with the AASHTO National Transportation Product Evaluation Program's (NTPEP) Reinforcing Steel/Welded Wire Reinforcement (REBAR/WWR) audit program. To be compliant by March 1, 2019, a 2018 audit must have occurred.

Follow the instructions on the NTPEP's website ([www.ntpep.org](http://www.ntpep.org)) to participate in the REBAR/WWR audit program.

Forward an official copy of the latest NTPEP audit report, a separate copy of the split sample test results (Variation Report), the plant's quality control plan, and the Certificate of Compliance to the Bureau Chief of Construction & Materials for evaluation.

**1603.5 ATTAINING AND MAINTAINING PREQUALIFIED STATUS**

**a. Attaining prequalified status.** For a plant to be prequalified to provide wire and/or welded wire fabric to KDOT projects, the following requirements must be complied with:

- (1) Producing mills must comply with the NTPEP's REBAR/WWR audit program.

(2) Audit test results must comply with the applicable AASHTO or ASTM specifications referenced in **subsections 1603.2b**.

(3) The audit's 3<sup>rd</sup> party tensile test results will be compared to the parallel plant data from each heat or lot for variations and differences. These variations and differences may not exceed the values shown in **TABLE 1603-1**, based on the 3<sup>rd</sup> party values as the reference.

<b>TABLE 1603-1: WIRE &amp; WELDED WIRE FABRIC COMPARISON TESTING</b>		
<b>Property</b>	<b>Individual Specimen Test Results</b>	<b>Average Test Results for the Heat or Lot</b>
Tensile Strength	10%	5%

All variations and differences are absolute value based.

**b. Maintaining prequalified status.** For a plant to maintain prequalified status, the following requirements must be complied with:

(1) Provide a copy of the latest annual NTPEP audit report, a separate copy of the related split sample test results (Variation Report), and the Certificate of Compliance as soon as it is received. Producing mills whose status is no longer "compliant", as shown on the NTPEP website, will be removed from prequalified status.

(2) All prequalified plants that are currently providing wire welded steel wire fabric for KDOT projects will have their product quality monitored by the testing of verification samples.

(a) Sampling. Each calendar year, every KDOT District will randomly select a minimum of one verification sample from the fabric being provided by each prequalified plant for use on KDOT projects in the District. These project-obtained samples will be drawn from various shipments and heat. In addition, Bureau of Construction & Materials staff will sample available wire and/or fabric provided by prequalified plants. These samples will be obtained at production facilities incorporating the wire or fabric into their products, at warehouse locations or at any other location chosen by the KDOT representative, and will be drawn from various shipments and heats. Samples will be submitted to KDOT's Materials & Research Center for testing in accordance with **subsection 1603.3**.

(b) Testing. The verification samples are to comply with the requirements of the applicable AASHTO or ASTM specifications referenced in **subsection 1603.2b.**, with the exceptions noted below:

- It will not be permissible for the test results from any verification sample from a prequalified plant to be less than that shown in **TABLE 1603-2**.

<b>TABLE 1603-2: WIRE &amp; WELDED WIRE FABRIC VERIFICATION TESTING</b>	
<b>Property</b>	<b>Requirement</b>
Unit Weight (Deformed Wire)	98% of the specified minimum
Weld Shear Strength, Average (when applicable)	95% of the specified minimum
Tensile Strength	95% of the specified minimum
Reduction of Area, % (Non-deformed Wire)	Specified minimum minus 2

- No annual verification sample from a prequalified plant will be permitted to fail the bend test.
- If the original verification sample fails to comply with the preceding, the Engineer's representative may either resample the failing lot one time only on a two for one basis, or reject the failing lot. The Contractor is to replace the rejected lot at no additional cost to the KDOT. The initial test results will be replaced by those of the resample specimens.

(3) The failure of a verification sample to comply with the requirements of **subsection 1603.5b.(2)(b)** or the failure of a mill to provide the annual documents described in **subsection 1603.5b.(1)** may result in disqualification of the plant and its removal from the prequalified source list.

### **1603.6 DISQUALIFICATION**

A prequalified plant that is disqualified must wait a minimum of one calendar year before attempting to re-qualify. Submit the information described in **subsection 1603.4** relating to the first NTPEP audit following the one year wait period. The plant is subject to the requirements of **subsection 1603.5a.** before prequalification can be attained. A plant that fails two times, consecutive or otherwise, to comply with **subsection 1603.5b.(2)(b)** may be permanently disqualified.

### **1603.7 BASIS OF ACCEPTANCE**

The plant must be currently prequalified.

Receipt and approval of a Type C certification as specified in **DIVISION 2600.**

Single sections, bound sections or rolls, or otherwise grouped fabric must be tagged or otherwise marked in a durable manner. At a minimum, this identification must list the fabric manufacturers corporate identification and plant location, the heat, lot, job, or mill order number, and display a copy of the of the identification markings attached to the delivered materials.

Visual inspection at destination for condition and compliance with dimensional and other requirements.

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