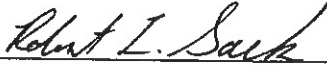


To: SUPERSEDED BY <u>EB 06-057</u> EFFECTIVE <u>5/3/07</u>		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 04-001
Title: REVISIONS TO STANDARD SPECIFICATIONS FOR §715-16 STAINLESS STEEL CONNECTING PRODUCTS			
Distribution: ☐ Manufacturers (18) ☒ Local Govt. (31) ☒ Agencies (32) ☐ Surveyors (33) ☒ Consultants (34) ☒ Contractors (39) ☐ _____ ()		Approved:  Robert L. Sack, Deputy Chief Engineer Technical Services Division <u>13 JAN 04</u> Date	

ADMINISTRATIVE INFORMATION:

- **Effective Date:** This Engineering Instruction (EI) is effective immediately.
- **Superseded Issuances:** None.
- **Disposition of Issued Materials:** The information transmitted by this issuance will reside in the Standard Specifications.

PURPOSE: This EI issues revisions to Standard Specification §715-16 Stainless Steel Connecting Products.

TECHNICAL INFORMATION:

- Standard Specification §715-16 Stainless Steel Connecting Products is revised to allow Grade B8 bolts less than 9.52 mm in diameter to be accepted based on chemical properties only.
- **Actions by Engineers-in-Charge:** Engineers-in-Charge of ongoing contracts, including those submitted for letting prior to April 1, 2004, should file a copy of this EI in the contract records as documentation of the change in accordance with the Construction Administration Manual §104-03.
- **Actions by Designers:** Incorporate changes issued by this EI into PS&Es submitted for letting on or after April 1, 2004. When required, initiate changes to the contract documents by amendment. Implementation prior to May 6, 2004, should be noted in the PS&E transmittal memo and/or amendment request memo. The attached revised specification shelf note must be submitted to the PS&E Unit with the PS&E transmittal and/or amendment request memo for inclusion in contract proposals.

IMPLEMENTATION:

- Beginning with projects submitted for the letting of April 1, 2004, and before May 6, 2004, the attached revised specification shelf note will be added to the contract proposal prior to printing or by amendment.
- Beginning with projects submitted for the letting of May 6, 2004, MO DQAB will insert the shelf note into contract proposals.

TRANSMITTED MATERIALS: Attached is the revised Standard Materials Specification §715-16.

BACKGROUND: §715-16 Stainless Steel Connecting Products was inadvertently changed in the transition from the 1995 Standard Specifications to the 2002 Standard Specifications. The Chemical and Physical Requirements of the 1995 version of this specification contained a note which allowed acceptance of Grade B8 bolts less than 9.52 mm in diameter to be based on chemical properties only. By dropping this note, stainless steel hardware of all sizes must be sampled and tested both chemically and

EI 04-001 Page 2 of 2

physically.

Some Standard Sheets used for signs, such as M645-70, allow the use of either aluminum or stainless steel hardware. In some instances stainless steel hardware is preferred over aluminum because it is harder and less prone to stripping. Stainless steel hardware is more difficult to use due to sampling and testing delays introduced to comply with additional QA requirements. Aluminum hardware is still accepted based on chemical properties only.

CONTACT: Questions or comments regarding this issuance should be directed to the General Engineering Section of the Materials Bureau at (518) 457-4285.

Make the following changes to the Standard Specifications of January 2, 2002.

Page 7-173, under §715-16 Stainless Steel Connecting Products, **remove** the entire section and **replace** it with the following:

715-16 Stainless Steel Connecting Products

SCOPE. This specification covers stainless steel bolts, nuts, washers, and set screws used in the construction of sign structures.

MATERIAL REQUIREMENTS. Stainless steel connecting products shall conform to the following:

- Hex bolts designed for 585 MPa minimum yield strength shall conform to the requirements of ASTM A193, Grade B6 (AISI 410).
- Nuts for Grade B6 bolts shall conform to the requirements of ASTM A194, Grade B6 (AISI 416).
- Hex bolts and U-bolts designed for 205 MPa minimum yield strength shall be either AISI 304 or 305 stainless steel conforming to the requirements of ASTM A193, Grade B8 or Grade B8P, Class 1.
- Hex bolts and U-bolts designed for 690 MPa minimum yield strength shall be either AISI 304 or 305 stainless steel conforming to the requirements of ASTM A193, Grade B8 or Grade B8P, Class 2.
- Nuts for Grade B8 or Grade B8P bolts shall conform to the requirements of ASTM A194, Grade B8 (AISI 304).
- Flat washers shall be circular, flat, smooth, and fabricated from material conforming to the requirements of ASTM A167 (AISI 302B (UNS S30215) or ASTM A240 (AISI 302 or 304 (UNS S30200 or S30400))).
- Lock washers shall be fabricated in accordance with ANSI B18.21.1 from material conforming to the requirements of ASTM A313 (AISI 302, 304, or 305 (UNS S30200, S30400, or S30500)) with a hardness Rc 35-43.
- Set screws shall conform to the requirements of ASTM A320, Grade B8F (AISI 303).

Cleaning. Following heat treatment, all stainless steel connecting products shall be descaled and cleaned in accordance with the requirements of ASTM A380. After cleaning and descaling the stainless steel hardware shall be passivated. Stainless steel hardware with a black or speckled rusty appearance is acceptable provided the discoloration does not run when installed, as determined by the Engineer.

Delivery. All stainless steel connecting products shall be delivered to the project site no less than 30 days prior to utilization of the hardware to allow ample time for sampling and testing.

SAMPLING AND TESTING. Stainless steel connecting products will be sampled at the project site or supply location. Sampling and testing will be in accordance with procedural directives of the Materials Bureau.

BASIS OF ACCEPTANCE. Stainless steel connecting products will be accepted in stock-lot quantities at the project site or supplier's location in accordance with procedural directives of the Materials Bureau. Grade B8 bolts less than 9.52 mm in diameter will be accepted based on chemical properties only.