

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
REINFORCEMENT, STAINLESS STEEL, SPECIAL

C&amp;T:SCK

1 of 2

C&amp;T:APPR:RDT:EMB:11-19-08

**a. Description.** Furnish and install reinforcing steel in structural concrete. This work shall be done in accordance with section 706 of the Standard Specifications for Construction, except as modified herein.

**b. Materials.** All materials required shall be as specified in the noted document, except for the following modifications:

1. Grade 60 deformed reinforcement bars, austenitic stainless steel, UNS designation S24100 (type XM-28), or austenitic-ferritic stainless steel, UNS designation S32205 or S32304 may only be used. Do not mix different bar types. The bars shall conform to ASTM A 955.

2. The stainless steel reinforcement bars shall conform to the chemical composition as specified in ASTM A 276, Table 1, Chemical Requirements.

3. Heat treatment. Bars may be furnished in one of the heat treatment conditions listed in ASTM A 955, and as needed to meet the requirements of the specification.

4. Finish. Bars are to be supplied free of dirt, mill scale, oil, and debris, by pickling or abrasive blasting.

5. Bending. Bending shall be done in accordance with section 905.03.A of the Standard Specifications for Construction.

6. Acceptance testing shall be performed on a per project basis. Sample size shall be 2 bars per size, per manufacturer, 1 bar of 24 in. minimum length, and 1 bar of 36 in. minimum length. Samples shall be submitted to MDOT for testing. Testing shall be in accordance with ASTM A 370 and the ASTM specification applicable to the material referred to herein.

7. Mill Certificates. The Certificates shall be provided for each project and shall:

A. Be from the supplying mill verifying that the stainless steel reinforcement provided has been sampled and tested and the test results meet the contract requirements;

B. Include a copy of the chemical analysis of the steel provided, with the UNS designation, the heat lot identification and the source of the metal if obtained as ingots from another mill;

C. Include a copy of tensile strength, yield strength, and elongation tests on each of the sizes (diameter) of stainless steel reinforcement provided;

D. Permit positive determination that the reinforcing provided is that which the test

results cover.

8. Bar Chairs and Wire Ties. The bar chairs and wire ties required for shipping, placing and fastening the steel reinforcement shall meet the following:

A. Bar chairs shall be plastic coated, epoxy coated, plastic, or stainless steel conforming to the requirements of ASTM A 493, Type 316 (UNS number S31600). Legs of chairs shall be turned up a minimum of 1/8 inch. Stainless steel chairs used above steel beams or metal stay-in-place forms shall have plastic coated feet.

B. Wire ties shall be plastic coated, plastic, or stainless steel conforming to the requirements of ASTM A 493, Type 316 (UNS number S31600), annealed. Wire size shall be the same as used for mild carbon steel reinforcement.

C. Tie-down wires shall be plastic coated, or stainless steel conforming to the requirements of ASTM A 493, Type 316 (UNS number S31600), annealed.

c. **Construction.** Construction methods shall conform to section 706 of the Standard Specifications for Construction except for the following modifications:

1. Notification. The Engineer shall notify Construction and Technology Division, Experimental Studies at (517) 322-5707, 2 weeks prior to placing steel reinforcement.

2. Splices. Splices shall generally be of the lap type. Stainless steel mechanical splices may be used in certain situations, subject to the approval of the Engineer.

3. Approval. Stainless steel reinforcement placed in any member must be inspected and approved by the Engineer before placing concrete. Concrete placed in violation of this specification may be rejected and removal required.

d. **Measurement and Payment.** The completed work as described will be measured and paid for at the contract unit price using the following contract item (pay item):

<b>Contract Item (Pay Item)</b>	<b>Pay Unit</b>
Reinforcement, Stainless Steel, Special .....	Pound

**Reinforcement, Stainless Steel, Special** will be paid for by the pound and includes furnishing and installing the reinforcement and all component materials as specified in the special provision and on the plans.