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| <b>SUPERSEDED BY</b><br><b>EB 15-031</b><br><b>EFFECTIVE 9/28/15</b>                                                                                                                                                                                                                                                                                              |  | New York State<br>Department of<br>Transportation<br><b>ENGINEERING<br/>         INSTRUCTION</b>                                                                                                                                                | <b>EI</b><br><b>10-004</b> |
| Title: <b>NEW STANDARD SPECIFICATION §710-27 ROCK SLOPE WIRE ROPES</b>                                                                                                                                                                                                                                                                                            |                                                                                    |                                                                                                                                                                                                                                                 |                            |
| Distribution:<br><input type="checkbox"/> Manufacturers (18) <input type="checkbox"/> Surveyors (33)<br><input checked="" type="checkbox"/> Local Govt. (31) <input checked="" type="checkbox"/> Consultants (34)<br><input checked="" type="checkbox"/> Agencies (32) <input checked="" type="checkbox"/> Contractors (39)<br><input type="checkbox"/> _____ ( ) |                                                                                    | Approved:<br><br>Robert L. Sack, P.E.<br>Deputy Chief Engineer (Research)<br><div style="text-align: right;"> <b>27 JAN 10</b><br/>         Date       </div> |                            |

#### ADMINISTRATIVE INFORMATION:

- This Engineering Instruction (EI) is effective beginning with projects submitted for the letting of May 6, 2010.
- Superseded issuance(s): This EI does not supersede any previous issuances.
- The information transmitted by this issuance will be incorporated into a future revision to the Standard Specifications.

**PURPOSE:** The purpose of this EI is to revise Standard Specification Section 710 *Fence and Guide Rail*.

#### TECHNICAL INFORMATION:

- Standard Specification §710-27 *Rock Slope Wire Ropes* is created and assigned the material specifications relating to wire ropes used in rock slope catchment fences.

#### IMPLEMENTATION:

- The Main Office Design Quality Assurance Bureau will insert these standard specification shelf notes beginning with projects submitted for the letting of May 6, 2010.

#### TRANSMITTED MATERIALS:

- Standard Specification shelf notes for *Section 710 Fence and Guide Rail*. Both metric and US Customary shelf notes are attached.

**BACKGROUND:** The NYS Department of Transportation is implementing Trns-port SiteManager, including both Construction and Materials functionality. Implementation of standard AASHTO software enables SiteManager to allow revising this agency's practices to be more consistent with industry-accepted best practices. The revisions to the Standard Specifications are to minimize the overall quantity of special specifications.

**CONTACT:** Questions or comments regarding this issuance should be directed to Randall J. Romer, P.E. of the Geotechnical Engineering Bureau at (518) 457-4714, [rromer@dot.state.ny.us](mailto:rromer@dot.state.ny.us). Questions or comments regarding the technical aspects of the Standard Specifications should be directed to Yves Nazon, of the Geotechnical Engineering Bureau at (518) 457-4729, [ynazon@dot.state.ny.us](mailto:ynazon@dot.state.ny.us).

## ROCK SLOPE WIRE ROPES

Make the following changes to the Standard Specifications dated May 4, 2006:

Page 826, **Delete** SECTION 710-27 THRU 710-29 (VACANT) and **Replace** it with the following:

### §710-27 – ROCK SLOPE WIRE ROPES

**SCOPE.** This specification covers the material requirements for the components for wire ropes generally used in a rock catchment system. The following materials are evaluated in this specification:

710.2701 – Rock Slope Wire Ropes, Net Supporting Wire Rope for Wire Rope Rock Catchment Fence.

710.2702 – Rock Slope Wire Ropes, Seam Rope for Wire Rope Rock Catchment Fence.

710.2703 – Rock Slope Wire Ropes, Tieback Restraining Cable for Wire Rope Rock Catchment Fence.

710.2704 – Rock Slope Wire Ropes, Anchor Cable for Wire Rope Rock Catchment Fence.

710.2705 – Rock Slope Wire Ropes, Seam Rope for Wire Mesh Slope Protection

**MATERIAL REQUIREMENTS.** Provide material in accordance with TABLE 710-27A *Rock Slope Wire Ropes*.

| TABLE 710-27A ROCK SLOPE WIRE ROPES           |                                                                         |                                         |                           |
|-----------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------|---------------------------|
| Rock Slope Wire Rope                          | Rope/Cable                                                              | Minimum Diameter                        | Minimum Breaking Strength |
| Wire Ropes for Wire Rope Rock Catchment Fence | Net Supporting Wire Rope                                                | 16 mm (6x19 construction)               | 165 kN                    |
|                                               | Seam Rope                                                               | 8 mm (7x7 construction)                 | 41 kN                     |
|                                               | Tieback Restraining Cables                                              | 16 mm (6x19 construction)               | 165 kN                    |
|                                               | Anchor Cables (3 m min. length, equipped with heavy duty type thimbles) | 19 mm                                   | 236 kN                    |
| Seam Wire for Wire Mesh Slope Protection      | Seam Rope                                                               | 8 mm (7 x 19 Galvanized Aircraft Cable) | 44 kN                     |

All wire ropes for the wire nets, supporting ropes, seam ropes and anchors shall be composed of steel wires individually galvanized before being woven into the ropes.

**BASIS OF ACCEPTANCE.** The Wire Ropes for Wire Rope Rock Catchment Fence will be accepted on the basis of a material certification that the product conforms to this specification.

The Seam Wire Rope for Wire Mesh Slope Protection will be accepted on the basis of a material certification that the product conforms to this specification.

### 710-28 THRU 710-29 (VACANT)

## ROCK SLOPE WIRE ROPES

Make the following changes to the Standard Specifications dated May 1, 2008:

Page 867, **Delete** SECTION 710-27 THRU 710-29 (VACANT) and **Replace** it with the following:

### §710-27 – ROCK SLOPE WIRE ROPES

**SCOPE.** This specification covers the material requirements for the components for wire ropes generally used in a rock catchment system. The following materials are evaluated in this specification:

710.2701 – Rock Slope Wire Ropes, Net Supporting Wire Rope for Wire Rope Rock Catchment Fence.

710.2702 – Rock Slope Wire Ropes, Seam Rope for Wire Rope Rock Catchment Fence.

710.2703 – Rock Slope Wire Ropes, Tieback Restraining Cable for Wire Rope Rock Catchment Fence.

710.2704 – Rock Slope Wire Ropes, Anchor Cable for Wire Rope Rock Catchment Fence.

710.2705 – Rock Slope Wire Ropes, Seam Rope for Wire Mesh Slope Protection

**MATERIAL REQUIREMENTS.** Provide material in accordance with TABLE 710-27A *Rock Slope Wire Ropes*.

| TABLE 710-27A ROCK SLOPE WIRE ROPES           |                                                                            |                                             |                           |
|-----------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------|---------------------------|
| Rock Slope Wire Rope                          | Rope/Cable                                                                 | Minimum Diameter                            | Minimum Breaking Strength |
| Wire Ropes for Wire Rope Rock Catchment Fence | Net Supporting Wire Rope                                                   | 5/8 in. (6x19 construction)                 | 37 kips                   |
|                                               | Seam Rope                                                                  | 5/16 in. (7x7 construction)                 | 9 kips                    |
|                                               | Tieback Restraining Cables                                                 | 5/8 in. (6x19 construction)                 | 37 kips                   |
|                                               | Anchor Cables (10 ft. min. length, equipped with heavy duty type thimbles) | ¾ in.                                       | 53 kips                   |
| Seam Wire for Wire Mesh Slope Protection      | Seam Rope                                                                  | 5/16 in. (7 x 19 Galvanized Aircraft Cable) | 10 kips                   |

All wire ropes for the wire nets, supporting ropes, seam ropes and anchors shall be composed of steel wires individually galvanized before being woven into the ropes.

**BASIS OF ACCEPTANCE.** The Wire Ropes for Wire Rope Rock Catchment Fence will be accepted on the basis of a material certification that the product conforms to this specification.

The Seam Wire Rope for Wire Mesh Slope Protection will be accepted on the basis of a material certification that the product conforms to this specification.

**710-28 THRU 710-29 (VACANT)**