

Origination Form

Specifications

Submittal Information			
Name:	Mateo Carvajal	Standard Specification Section:	931
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Date:	2026-06-15T17:10:38Z	Associated Specs:	415

Summary:

Section 931 is revised to remove duplicative acceptance requirements for steel bars, wire reinforcement, and welded wire reinforcement that are now addressed in Section 415. Certification language is updated to align with the revised acceptance approach, including AASHTO PEAS compliance documentation and current material acceptance practices. Additional editorial updates are included for clarity, consistency, and specification formatting, including section title revisions, terminology cleanup, and conforming language changes in related reinforcing, coupler, and dowel bar provisions

Justification:

Acceptance requirements for reinforcing materials are currently split between Sections 415 and 931, which creates duplication and potential confusion. Section 931 needs to be revised to align with the updated acceptance approach in Section 415 and the AASHTO PEAS documentation requirements.

Do the changes affect other types of specifications?

Neither

List Specifications Affected:

Other Affected Documents/Offices	Contacted	Yes/No
Other Standard Plans		No
Florida Design Manual		No
Structures Manual		No
Basis of Estimates Manual		No
Approved Product List		No

Construction Office		No
Maintenance Office		No
Materials Manual		No
Traffic Engineering Manual		No

Are changes in line with promoting and making progress on improving safety, enhancing mobility, inspiring innovation, and fostering talent; explain how?

These changes improve consistency and clarity in reinforcing material requirements and acceptance documentation, which supports more reliable material acceptance and specification administration.

What financial impact does the change have; project costs, pay item structure, or consultant fees?

Cost of joining AASHTO PEAS: This change is expected to have minimal financial impact, as over 90% of producers already participate in the AASHTO PEAS program, and the associated fee for remaining producers will be substantially offset by reduced testing costs, since material acceptance will now be based on PEAS reports in lieu of independent testing.

What impact does the change have on production or construction schedules?

The changes may improve efficiency by reducing reliance on lot-by-lot sampling and emphasizing certified documentation for acceptance.

How does this change improve efficiency or quality?

This change improves efficiency and consistency by removing duplicative acceptance provisions for reinforcing materials from Section 931 and aligning material certifications and documentation with the revised acceptance approach in Section 415.

Which FDOT offices does the change impact?

State Materials Office

What is the impact to districts with this change?

N/A

Does the change shift risk and to who?

N/A

Provide summary and resolution of any outstanding comments from the districts or industry.

Comments and Responses are available on the Track the Status of Revisions hyperlink located on the Specifications landing page: <https://www.fdot.gov/specifications/default.shtm>

What is the communication plan?

Through the established specification revision process (e.g., Internal and Industry Review)

What is the schedule for implementation?

The Standard Specifications eBook and Workbook are effective July 1st every year.

METAL ACCESSORY MATERIALS FOR CONCRETE PAVEMENT AND CONCRETE STRUCTURES
(REV 6-15-26)

ARTICLE 931-1 is deleted and the following substituted:

931-1 Steel Reinforcement ~~Steel (for Pavement and Structures).~~

931-1.1 Steel Bars ~~General:~~

Reinforcing Steel manufacturers will be listed as an AASHTO Product Evaluation & Audit Solutions compliant producer. Unless otherwise specified in the contract documents, all reinforcing bars will be deformed except for spiral ties in precast/prestressed piles.

931-1.1.1 Carbon Steel Bars: Carbon steel bars for concrete reinforcement shall conform to the requirements of ASTM A615 Grades 60 ~~or~~, 80, or 100. Low-alloy steel bars conforming to the requirements of ASTM A706 will be considered equivalent to ASTM A615 steel of the corresponding size and grade.

931-1.1.2 Stainless Steel Bars: Stainless steel bars for concrete reinforcement shall conform to the requirements of ASTM A955, Grades 60 ~~or~~, 75; ~~or ASTM A276, or 80,~~ UNS S32205, S32304, S31653, or S31803.

931-1.1.3 Low-Carbon Chromium Steel Bars: Low-carbon chromium steel bars for concrete reinforcement shall conform to the requirements of ASTM A1035 Grade 100.

~~931-1.1.4 Special Requirements: The following special requirements shall apply:~~

~~1. Unless otherwise specified or shown in the Plans all reinforcing bars No. 3 and larger shall be deformed bars.~~

~~2. Twisted bars shall not be used.~~

~~3. Wherever in the Specifications the word "purchaser" appears it shall be taken to mean the Department.~~

931-1.1.4 Stainless Steel-Clad Bars: Stainless steel-clad bars for concrete reinforcement will conform to the requirements of AASHTO M 329, Grades 60 and 75.

931-1.1.5 Acceptance Certification of Steel Bars: ~~Acceptance Certification~~ of reinforcing steel shall be based on the ~~manufacturer being on the AASHTO Product Evaluation & Audit Solutions list of compliant producers, samples taken by the Department, and manufacturer's certified mill analysis test report certifying that:~~ The test results shall meet the specification limits of the ASTM or AASHTO designation for the size, grade, and any additional requirements. The certification must include compliance with the AASHTO Product Evaluation & Audit Solutions work plan and the source of supply requirements specified in Section 6. ~~The manufacturer's certified mill analysis for each heat, size, and grade per shipment of reinforcing steel shall be provided to the Engineer prior to use.~~

~~The Engineer will select samples representing each LOT of reinforcing steel. A sample is defined as the reinforcing steel and the certified mill analysis corresponding to the sample. A LOT is defined as the weight of all bars, regardless of size, grade or pay item in consecutive shipments of 100 tons or less. Samples shall be cut from bundled steel that is shipped to the jobsite.~~

~~Projects with less than two tons of bars do not require Department sampling.~~

931-1.2 Wire Reinforcement:

931-1.2.1 General: Wire Reinforcement manufacturers will be listed as an AASHTO Product Evaluation & Audit Solutions compliant producer.

931-1.2.1.1 Carbon Steel Wire Reinforcement: Plain and deformed carbon steel wire reinforcement shall meet the requirements of ASTM A1064. ~~Deformed carbon steel wire shall be Grade 75.~~

931-1.2.1.2 Stainless Steel Wire Reinforcement: Plain and deformed stainless steel wire reinforcement shall meet the requirements of ASTM A276, UNS S30400.

931-1.2.1.3 Acceptance Certification of Wire Reinforcement: Acceptance Certification of wire reinforcement shall be based on the manufacturer's certified mill ~~analysis~~test report certifying that the test results meet the specification limits of the ASTM designation for the sizes, grade, and any additional requirements. ~~Prior to use, submit to the Engineer the manufacturer's certified mill analysis for each heat and size per shipment. The certification must include compliance with the AASHTO Product Evaluation & Audit Solutions work plan and the source of supply requirements specified in Section 6.~~

931-1.3 Carbon Steel Welded Wire Reinforcement:

931-1.3.1 General: Welded Wire Reinforcement manufacturers will be listed as an AASHTO Product Evaluation & Audit Solutions compliant producer.

931-1.3.1.1 Carbon Steel Welded Wire Reinforcement: Welded wire reinforcing steel shall meet the requirements of ASTM A1064.

931-1.3.1.2 Acceptance Certification of Carbon Steel Welded Wire Reinforcement: Acceptance Certification of welded wire reinforcement shall be based on the manufacturer's certified mill ~~analysis~~test report certifying that the test results meet the specification limits of the ASTM designation for the type, sizes, and any additional requirements. ~~Prior to use, submit to the Engineer the manufacturer's certified mill analysis for each heat and size per shipment. The certification must include compliance with the AASHTO Product Evaluation & Audit Solutions work plan and the source of supply requirements specified in Section 6.~~

931-1.4 Couplers for Steel Bars:

931-1.4.1 Approved Product List (APL): ~~The e~~Couplers ~~used~~ shall be a product included on the Department's APL.

~~Manufacturers seeking approval of their product shall seeking evaluation of products for inclusion on the APL shall submit an application in accordance with Section 6 and must submit product photo and drawings, technical data sheets, and demonstrate the performance of their product in accordance with the requirements in 931-1.4.2 through 931-1.4.4 as applicable and 931-1.4.5 this section.~~

931-1.4.2 Couplers for Carbon Steel Bars: Couplers for use with carbon steel bars ~~shall~~must be fabricated from an alloy that is electrochemically compatible with bars that meet the requirements of 931-1.1.1.1.

931-1.4.3 Couplers for Stainless Steel and Stainless-Clad Bars: Couplers for use with stainless steel and stainless clad bars shall be fabricated from an alloy that is electrochemically compatible with bars that meet the requirements of 931-1.1.1.2.

931-1.4.4 Couplers for Low-Carbon Chromium Steel Bars: Couplers for use with low-carbon chromium steel bars shall be fabricated from an alloy that is electrochemically compatible with bars that meet the requirements of 931-1.1.1.3.

931-1.4.5 Special Requirements: Couplers shall develop at least 125% of the specified yield strength of the bar being spliced.

ARTICLE 931-2 is deleted and the following substituted:

931-2 ~~Metal~~ Materials for Joints in Concrete Pavement.

931-2.1 Sheet Metal Bottom Strips: ~~For concrete pavement using the special select soil base option, the s~~Sheet metal strip for protecting the bottom and side edges of transverse expansion joints shall be composed of galvanized sheet metal of 0.0157 inches minimum thickness and shall conform to the requirements of ASTM A653 coating designation G90.

~~_____~~ The sheets shall be furnished in accordance with the dimensions shown in the Plans. They may be in one continuous piece, or spliced. When splicing is used the metal shall be lapped not less than 3 inches and securely fastened, by welding or otherwise, in such manner as to leave the spelter undamaged and produce a smooth sliding surface in contact with the pavement slab. ~~The splices shall be spaced not less than 10 feet apart and not less than 5 feet from either end.~~ The complete sheet shall not vary from a straight line by more than 1 inch from end to end.

~~The Contractor shall submit to the Engineer~~ Certification of sheet metal bottom strips will be based on the manufacturer's a-certified mill analysis test report certifying that the test results meet the specification limits of the ASTM designation ~~from the manufacturer of the sheet metal bottom strips including test results~~ for thickness, dimension, grade, length, size, and ~~and~~ spacing, and any additional requirements. Each certified mill analysis test report shall cover only one type of metal material for joints.

931-2.2 Bars ~~and Chairs~~ for Longitudinal Joints: Transverse reinforcing ~~steel~~ across the longitudinal joint shall be deformed ~~steel~~ bars conforming to the requirements of 931-1.1 ~~except that the bars may be any grade shown in ASTM A615.~~

~~_____ These bars, and the chairs to hold them in place, shall be of the type and spacing as indicated in the Plans.~~

931-2.3 Dowel Bars: Dowel bars must meet the requirements of Table 931-1. ~~They shall be of the length, size and spacing as shown in the Plans.~~

~~_____ The Contractor shall submit to the Engineer a certified~~ Certification of test report from the manufacturer of the dowel bars will be based on the manufacturer's certified mill test report certifying that the test results will meet the specification limits of the ASTM or AASHTO ~~confirming that the requirements of this Section are met. The certified test report shall conform to the requirements of Section 6 and include metallurgical mill analysis~~ designation for the size, grade, length, and any additional requirements and size. Each certification shall cover only one LOT for dowel bars. The certification must include compliance with the AASHTO Product Evaluation & Audit Solutions work plan and the source of supply requirements specified in Section 6.

931-2.4 Chairs and Metal Expansion Caps: The chairs and metal expansion caps shall be of an approved type as shown in the Plans.

~~_____ Dowel bars for expansion joints shall have a metal cap on one end so placed to provide ample space for movement of the slab. Continuous sleeves covering one half of the length of the bar will not be permitted. Other fasteners may be approved. Dowel bars shall be coated with an approved material to break the bond.~~

ARTICLE 931-3 is deleted and the following substituted:

931-3 Metal Dowel Bar Assemblies for Joints in Concrete Pavement.

931-3.1 Approved Product List (APL): The dowel bars and basket assembly must meet the requirements of Table 931-1 and shall be a product included on the Department's APL.

Manufacturers seeking evaluation of their product shall submit an application in accordance with Section 6 and shall submit product photo and drawings, technical data sheets, and certifications that demonstrate the performance of their products in accordance with the requirements in ~~931-3.1 thru 931-3.5~~ **Table 931-1 and this Section.**

Table 931-1 Material Requirement for Dowel Bar and Basket Assemblies		
Component	Base Metal Material	Coating
Dowel Bar	ASTM A615 931-1.1	ASTM A775 or SSPC Paint 20 or Epoxy $\geq$ 1.25% self-healing microcapsules (by weight)
Wire Basket Assembly	ASTM A1064	ASTM A775 or SSPC Paint 20 or Primer with $\geq$ 40% Solids (by weight) or Asphaltum Protective Coating or Modified Wax Coating or Corrosion Preventative Compound

~~Produce d~~ Dowel bars **will be** coated in the shop. Wire basket assemblies may be coated in the shop or the field. For welded wire basket assemblies fabricated after coating, apply touch-up coating in the shop ~~or field~~ over all welded connections. ~~All field applied coatings must have a volatile organic compound (VOC) content $\leq$ 420g/L.~~

931-3.2 Rigidity: The dowel bars shall be supported by an approved welded assembly possessing sufficient rigidity to hold the dowel bars in position to such accuracy that error or deviation from its required position in any bar in the entire installation after the pavement has been finished shall be no greater than 1/2 inch.

The assembly shall have continuous parallel spacer bars and two continuous parallel bearing members of no less than 1/4 inch diameter wire. One spacer bar shall be located at or near each end of the dowel. Alternate ends of dowels shall be welded to a spacer bar in such a manner as to maintain the dowels parallel to each other and permit sliding movement in the joint.

The free ends of each dowel shall be retained securely in place by means of wire loops or metal tubes welded to the other spacer bar. ~~An expansion cap shall be installed on one end of each bar if the dowels are being used in an expansion joint.~~

Suitable struts or ties shall be provided to hold the assembly in correct position during installation.

The assembly shall have an upright support welded to the spacer bar and continuous bearing member at the end of each dowel and a continuous bearing member.

If the upright support consists of a single vertical wire, the support shall be no less than 5/16-inch diameter wire. Otherwise, the support shall be no less than 1/4 inch diameter.

931-3.3 Sand Plates: Sand plates, ~~if required,~~ shall be made from no less than 3/8 inch sheet steel. Each plate shall have no less than 0.1 square feet of bearing area. The plates shall be furnished in sufficient number to provide uniform support for the complete assembly. They may be furnished separate from the assembly units or attached thereto by welding, suitable clips, or other approved means.

931-3.4 Welds: The welds of the assembly shall be made securely. A broken weld will be cause for rejection of the length of section of the assembly where it occurs.

~~**931-3.5 Assembly Placement:** When the dowel bar assembly is in place, it shall act as a rigid unit with each component part securely held in position relative to the other member of the assembly.~~

~~The entire assembly shall be held securely in place during placing, consolidating, and finishing the concrete by means of metal pins. Pins used on granular subbase or cold mixed bituminous stabilized subbase shall penetrate at least 12 inches below the dowel bar assembly. The pins shall be of no less than 1/4 inch diameter wire and shall be provided with a hook or arm welded to the pin in such a manner that it shall secure the assembly in place.~~

~~Nail securing systems may be used as an anchoring device on hot bituminous stabilized subbase. The nail shall be no less than 1/8 inch in diameter, no less than 2 inches in length and the nail head or attached washer shall be not less than 1/2 inch outside diameter. The nail shall be driven through both ends of a metal strap after it has been placed around one of the lower transverse bars on the dowel bar assembly.~~

~~At least eight pins or nails shall be used for each 12 foot section (a lane width) of assembly. Sand plates, if required, shall be drilled to receive the pins.~~

~~The Contractor shall provide the equipment and personnel necessary to verify dowel bar location after the concrete is placed and has received the initial screeding.~~