

Origination Form

Specifications

Submittal Information			
Name:	Ryan Gray	Standard Specification Section:	515
Email:	ryan.gray@dot.state.fl.us	Special Provision:	
Date:	2026-06-11T20:27:58Z	Associated Specs:	956

Summary:

Incorporate bollards into the Standards

Justification:

To make provision for items to be added to the APL

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	Intake Form Submission (ID# 862)	Yes
Structures Manual		No
Basis of Estimates Manual	Josh Toole	Yes
Approved Product List	Melissa Hollis	Yes
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?

Improves safety and consistency by standardizing usage and adding criteria

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

None

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

None

How does this change improve efficiency or quality?

Eliminates the need to create TSPs for each usage

Which FDOT offices does the change impact?

RDO

What is the impact to districts with this change?

Improved spec package preparation

Does the change shift risk and to who?

No

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 PEDESTRIAN/BICYCLE RAILINGS, GUIDERAILS, ~~AND~~ HANDRAILS AND
BOLLARDS**

(REV 6-11-26)

ARTICLE 515-1 is deleted and the following substituted:

515-1 Description.

Furnish and install metal pedestrian/bicycle railings, including bullet rails, guiderails and handrails in accordance with the Plans and Standard Plans.

Furnish metal bollards at the locations shown in the plans.

ARTICLE 515-2 is deleted and the following substituted:

515-2 Materials.

Meet the following requirements:

<u>Structural Concrete</u>	Section 346
<u>Non-Structural Concrete</u>	Section 347
Anchor Bolts, Rods, Nuts and Washers*	Section 962
<u>Metal Bollards, Sleeves, and Bases*</u>	956-1 and 956-4
<u>Bollard Covers</u>	956-1 and 956-5
Adhesive Anchors**	Section 937
Aluminum <u>Railing</u> **	Section 965
Bearing Pads**	932-5
Epoxy <u>Mortar Compounds</u> **	Section 926
Steel <u>Railing</u> **	Section 962

*Do not use expansion anchors.

**Use products listed on the Department's Approved Product List (APL).

ARTICLE 515-3 is deleted and the following substituted:

515-3 Construction Requirements.

515-3.1 General: Space railing posts to clear obstacles without exceeding maximum post spacing and maintain a uniform spacing with reasonable consistency. Place splices in approximately the same place within a railing section.

Railings must be Install metals that are free of burrs and sharp edges and all ground plug welds ground smooth.

Install bollards at locations shown in the Plans.

515-3.2 Welds: An American Welding Society certified welding inspector must visually inspect all welds for final approval. Nondestructive testing of welds is not required, unless otherwise shown in the Plans.

Prior to installation of the For railings, provide a certifying statement from the welding inspector must be provided prior to installation. The document must identify the project information, date of inspection, welding inspector name, and inspector certification number.

515-3.2.1 Aluminum Railing: Welds must be in accordance with Section 965. Filler material for seal welds, plug welds and bend splices may be ER4303.

515-3.2.2 Steel Railing: Meet the requirements of Section 962, except weld connections must be in accordance with AWS D1.1, Structural Welding Code, using E70XX weld material, unless otherwise shown in the Plans.

515-3.3 Coatings:

515-3.3.1 Aluminum Railing: Coating is not required, unless otherwise shown in the Plans. Finished product must have a smooth uniform appearance.

When a colored coating is required, use a fluoropolymer based powder coating system complying with American Architectural Manufacturers Association (AAMA) Specification No. 2605.

515-3.3.2 Steel Railing: Components must be hot-dip galvanized after fabrication in accordance with Section 962, unless otherwise shown in the Plans. When a colored coating is required, meet the requirements of 649-4.

515-3.3.3 Steel Bollards: Galvanize, paint, or powder coat carbon steel bollards and components in accordance with 956-5. When a color coating on galvanized steel is called for, meet the requirements of 649-4. Stainless steel and galvanized bollards do not require a coating.

ARTICLE 515-4 is deleted and the following substituted:

515-4 Shop Drawings.

For railings, ~~S~~submit shop drawings and obtain approval prior to fabrication in accordance with Section 5. Show project specific geometry (line and grade), post type and locations, expansion joint and splice locations.

Include other project specific details such as tapered end transitions, continuity or transition details post and panel infill type, and anchor bolt general details.

SUBARTICLE 515-5.1 is deleted and the following substituted:

515-5.1 General: For pedestrian/bicycle railing bases on concrete, ~~P~~place a 1/8 inch thick bearing pad with dimensions matching the base plate between the base plate and concrete surface.

SUBARTICLE 515-5.4 is deleted and the following substituted:

515-5.4 Anchoring Railings:

515-5.4.1 General: Secure nuts to a snug tight condition. Tack weld nuts to stem or distort bolt threads to prevent nut loosening and removal. Coat damaged galvanizing on bolt stems, nuts, and tack welds in accordance with Section 562.

515-5.4.2 Adhesive Anchors: Install anchors in accordance with Section 416.

515-5.4.3 C-I-P and Thru-Bolt Anchors: Use galvanized hex head anchor bolts. When thru-bolting is used, coat cut reinforcing steel inside the drilled hole with a zinc galvanizing compound in accordance with Section 562 prior to installing bolts.

515-5.4.4 Embedded Guiderail Posts: Core holes into the foundation concrete, then clean holes, in accordance with the manufacturer's instructions. At a minimum, use oil free compressed air to remove loose particles, brush the inside surface to free loose particles, then use compressed air again to remove any remaining particles. Use a Type AB, or F epoxy compound to secure guiderail posts into the cored holes.

ARTICLE 515-5 is expanded by the following new Subarticle:

515-5.5 Metal Bollards: Install post/pipe, bases or sleeves, and components in accordance with the manufacturer's instructions and details shown in the Plans. When called for in the Plans, fill pipe bollards with concrete to a smooth, rounded dome that will not hold water.

ARTICLE 515-6 is deleted and the following substituted:

515-6 Method of Measurement.

The quantity of railing to be paid for will be the plan quantity, in linear feet, installed and accepted. The quantity will be measured along the centerline of the top rail.

The quantity of bollards to be paid for will be the plan quantity for the number of bollards, furnished, installed, and accepted. No separate payment will be made for the sleeve, base, concrete, or covers.

ARTICLE 515-7 is deleted and the following substituted:

515-7 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section, including all materials, hardware, labor, and incidentals required to complete the installation.

For relocation of existing railing, price and payment will be full compensation for the removal and reinstallation, including all materials, hardware, labor, and incidentals required to complete the installation.

Payment will be made under the following:

- Item No. 515- 1- Pipe Handrail-Guiderail - per linear foot.
- Item No. 515- 2- Pedestrian/Bicycle Railing - per linear foot.
- Item No. 515- 3- Handrail - Retrofit to Existing Railing - per linear foot.
- Item No. 515- 4- Aluminum Bullet Railings - per linear foot.
- Item No. 515- 6- Bollards – per each.