

# ORINATION FORM

## Proposed Revisions to the Specifications

(Please provide all information - incomplete forms will be returned)

Date:

Office:

Originator:

Specification Section:

Telephone:

Article/Subarticle:

email:

**\*\*Will the proposed revision require changes to:**

Publication	Yes	No	Office Staff Contacted and date contacted
Standard Plans Index			
Traffic Engineering Manual			
FDOT Design Manual			
Construction Project Administration Manual			
Basis of Estimate/Pay Items			
Structures Design Guidelines			
Approved Product List			
Materials Manual			

**\*\*This section must be completed prior to processing proposed revisions.**

**Will this revision necessitate any of the following:**

**Design Bulletin**

**Construction Bulletin**

**Estimates Bulletin**

**Materials Bulletin**

**Are all references to external publications current?**

**Yes**

**No**

**If not, what references need to be updated? (Please include changes in the redline document.)**

**Why does the existing language need to be changed?**

**Summary of the changes:**

**Are these changes applicable to all Department jobs?**

**Yes**

**No**

**If not, what are the restrictions?**

Contact the State Specifications Office for assistance in completing this form.

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SECRETARY

**MEMORANDUM**

**DATE:** November 27, 2019

**TO:** Specification Review Distribution List

**FROM:** Daniel Strickland, P.E., State Specifications Engineer

**SUBJECT:** Proposed Specification: **9450100 Aluminum Pipe, Including Underdrain, Pipe Arch and Structural Plate Pipe and Pipe Arch**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Chase Knight from the State Materials Office to add National Transportation Product Evaluation Program (NTPEP) certification requirement and to move hydrostatic testing to the Materials Manual.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or online at <http://fdotewp1.dot.state.fl.us/programmanagement/development/industryreview.aspx> . Comments received after **December 25, 2019**, may not be considered. Your input is encouraged.

DS/VC  
Attachment

**ALUMINUM PIPE, INCLUDING UNDERDRAIN, PIPE ARCH AND STRUCTURAL PLATE PIPE AND PIPE ARCH  
(REV 11-6-19)**

ARTICLE 945-1 is deleted and the following substituted:

**945-1 General Requirements.**

Aluminum-alloy culvert pipe and underdrains shall meet the requirements of AASHTO M196 [and shall include plant certification from the National Transportation Product Evaluation Program \(NTPEP\)](#) and [compliance with](#) the additional provisions contained herein. Except for underdrain, corrugated aluminum pipe including pipe arch shall be fabricated with helical corrugations with a minimum of two annular corrugations formed into each end of each pipe to accommodate a coupling band. Annular fabrication is not permitted unless specifically called for in the Plans or specifications. Provide, as part of the shipping ticket, the actual mean inside diameter and total measured lengths of each lot of pipe shipped to the project. Include the minimum and maximum inside diameters used to calculate the actual mean inside diameter.

~~Test the pipe joints hydrostatically at the specified pressure using test methods in ASTM D3212 with the exceptions of Sections 7.3 and 7.4. In lieu of Section 7.4, deflect one side of the pipe to a 5% reduction in internal diameter using the parallel plate testing methodology of ASTM D2412. Load the deflected pipe to within 1/2 the actual pipe diameter from the centerline of the gasket or just beyond the end of the hugger band, whichever is greater. Ensure that the loading mechanism does not contact the hugger band or associated hardware. Testing of pipe joints shall be done at the manufacturing plant and witnessed by the Engineer or designated representative.~~

For sidedrains, unless shown otherwise in the Plans the minimum thickness of the metal shall be as specified below. Alternatively, if no future maintenance concerns exist, the Contractor may propose the pipe gage based on the Department's Drainage Manual and Culvert Service Life Estimator for approval by the Engineer.

Nominal Diameter or Equivalent (inches)	Sheet Gauge No.	Mean Thickness of Metal (inches)
6	18	0.048
8	16	0.060
10	16	0.060
12	16	0.060
15	16	0.060
18	16	0.060
21	16	0.060
24	16	0.060
30	14	0.075
36	14	0.075
42	12	0.105

TABLE 1 THICKNESS OF METAL FOR SIDEDRAIN PIPE		
Nominal Diameter or Equivalent (inches)	Sheet Gauge No.	Mean Thickness of Metal (inches)
48	12	0.105
54	12	0.105
60	10	0.135
66	10	0.135
72 and over	8	0.164

Where bituminous coated aluminum pipe is specified the bituminous coating shall meet the requirements as specified for corrugated steel pipe in 943-5. Bituminous coated and paved aluminum pipe shall meet the additional requirements specified in 943-6 and 943-7, as applicable.

Class IV pipe shall not be used.