

Origination Form

Specifications

Submittal Information			
Name:	Oliver Chung	Standard Specification Section:	556
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Date:	2026-05-19T12:36:22Z	Associated Specs:	N/A

Summary:

Adding ASTM A53 Grade B as an additional acceptable option.

Justification:

ASTM A139 Grade B is not commonly available. We are giving options to the contractors.

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?

N/A

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

Adding the ASTM A53 Grade B as an alternative to ASTM A139 Grade B.

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

N/A

How does this change improve efficiency or quality?

N/A

Which FDOT offices does the change impact?

State Construction Office, 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.

**JACK AND BORE
(REV 5-19-26)**

ARTICLE 556-2 is deleted and the following substituted:

556-2 Materials.

Select materials approved for installation within the right-of-way based on their suitability for the construction method as defined in Table 556-1. After determining product suitability, individual material standards as contained in Table 556-2 apply.

Table 556-1 Product Suitability by Construction Method		
Type	Pipe/Casing Installation Mode	Suitable Pipe/Casing
Jack and Bore	Jacking	Steel, Plastic
Micro tunneling	Jacking	DI, FRPM, PC, PCCP, RCCP, RCP, Steel

Table 556-2 Material Standards Acceptable for J&B and MT Installations		
Material Type	Non-Pressure	Pressure
Ductile Iron (DI)	AWWA C150/C151 ASTM A716	AWWA C150/C151
Fiberglass Reinforced Polymer Mortar (FRPM)	ASTM D3262	ASTM D3517 AWWA C950
Polymer Concrete (PC)	DIN 54815-1 and 2	N/A
Prestressed Concrete Cylinder Pipe (PCCP)	N/A	AWWA C301
Reinforced Concrete Cylinder Pipe (RCCP)	N/A	ASTM C361
Reinforced Concrete Pipe (RCP)	ASTM C76	ASTM C361 AWWA C300/C302
Steel	ASTM A139 Grade B ⁽¹⁾ <u>ASTM A53 Grade B⁽¹⁾</u> API 2B ⁽²⁾	AWWA C200 <u>AWWA C200</u> API 2B ⁽²⁾
Polyvinyl Chloride (PVC)	ASTM D1785	ASTM D1785
Reinforced Thermosetting Resin Pipe (RTRP)	ASTM D2996 or ASTM D2997	ASTM D2996 or ASTM D2997

⁽¹⁾ No hydrostatic test required
⁽²⁾ Dimensional tolerances only

Unless otherwise tested and approved by the Department, only use encasement pipe or uncased carrier pipe material that is new and has smooth interior and exterior walls.

When the Plans show that the casing is to be used as a drainage carrier pipe, extend the casing the entire length from drainage structure to drainage structure. When using

uncased carrier pipe, use pipe meeting the requirements in 556-4.3. Maintain a uniform diameter, wall thickness and material type for the entire length of the casing.

556-2.1 Steel Pipe Casing and Welds: In addition to meeting or exceeding the conditions contained in Table 556-1 and Table 556-2, meet the following requirements:

1. The size of the steel casing must be at least 6 inches larger than the largest outside diameter of the carrier. Casing size must accommodate pressure pipe or carrier pipe joint restraints.

2. The casing pipe must be straight seam pipe, spiral seam pipe, or seamless pipe.

3. All steel pipe may be bare inside and out, with the manufacturer's recommended minimum nominal wall thicknesses to meet the greater of either installation, loading or carrier requirements.

4. All steel casing pipe must be square cut and have dead-even lengths which are compatible with the J&B equipment.

Use steel pipe casings and welds meeting or exceeding the thickness requirements to achieve the service life requirements noted in the Department Drainage Manual Chapter 6. For purposes of determining service life, ensure that casings installed under roadways meet or exceed cross drain requirements and casings under driveways meet or exceed side drain pipe requirements. For pipe used in drainage applications, use pipe meeting the requirements in 556-4.3. For purposes of material classification, consider steel pipe casing structural plate steel pipe. Ensure that steel pipe casing of insufficient length achieves the required length through fully welded joints. Ensure that joints are air-tight and continuous over the entire circumference of the pipe with a bead equal to or exceeding the minimum of either that required to meet the thickness criteria of the pipe wall for jacking and loading or service life. All welding shall be done in accordance with the American Welding Society Structural Welding Code- Steel D1.1.

556-2.2 Reinforced Concrete Pipe Casing: In addition to meeting or exceeding the conditions contained in Tables 556-1 and Table 556-2, meet the following requirements:

Ensure that concrete pipe complies with the following minimum requirements:

1. 5,000 psi concrete compressive strength
2. Class III, IV, or V as required by load calculations, with a C-wall
3. Full circular inner and/or outer reinforcing cage
4. Multiple layers of steel reinforcing cages, wire splices, laps and spacers are permanently secured together by welding in place
5. Straight outside pipe wall with no bell modification
6. No elliptical reinforcing steel is allowed
7. Single cage reinforcement with a 1 inch minimum cover from the inside wall
8. Double cage reinforcement with a 1 inch minimum cover from each wall
9. Joints are gasket type
10. Additional joint reinforcement
11. For drainage applications, use pipe meeting the requirements in 556 4.3.

Upon installation, the Engineer may, at their discretion, require the Contractor to perform concrete wiping or injection of the joints if it is believed the joints have not maintained

their water tightness during the jacking operation. No additional payment will be made for this operation.

556-2.3 Plastic Pipe Casing: Plastic pipe may be jacked and bored if its physical properties meet or exceed the conditions contained in Tables 556-1 and 556-2, and has a sufficient wall thickness to maintain proper alignment without exceeding the deflection requirements in Section 430-9.3. If plastic pipe is Jacked and Bored it may not be used as a pressurized carrier. Plastic pipe casing installed by the jack and bore method requires the use of an auger. Open end jacking without the use of an auger for continuous cleanout of the bore as the pipe is advanced is not permitted. Closed end jacking is not permitted.

For drainage applications, use pipe meeting the requirements in 556-4.3.

556-2.4 Pipe Couplings and Joints: In addition to meeting or exceeding the conditions contained in Tables 556-1 and 556-2, to minimize potential for bore failure, couplings must not project at right angles from the casing diameter by more than 3/4 inch.

1. Steel Pipe Coupling and Joints:

a. Welds must comply with 556-2.1(4) when couplings are not used or when the coupling thickness is less than the casing thickness.

b. When couplings are used the casing joint needs only to be tack welded. Couplings must have a full bead weld such that the thickness, when measured at an angle of 45 degrees to the casing and coupling interface, must be no less than the casing thickness.

2. Plastic Pipe Couplings and Joints:

a. Must meet or exceed all ASTM strength and composition standards established for the casing material to which they are being attached.

b. Joints must be made sufficiently strong to withstand the pressures of jacking. All chemical welds must be completely set and cured before any jacking is attempted.