

**COMMENTS RECEIVED FROM INDUSTRY REVIEW FOR  
6300003 - Installation Requirements - Conduit for Fiber Optic Cable**

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**Larry Rivera**

File: 6300003 - Installation Requirements - Conduit for Fiber Optic Cable  
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Comments:

In Reviewing the Spec District 5 has the following comments:

- 1) Why a separate spec? We use 14 AWG wire for locate in addition all locate wire should be placed outside of conduit.
- 2) Add language that all locate wire splicing shall be in pull boxes, no in-line splicing allowed. Splices at the pullbox for the tone wire shall meet NEC requirements for continuity.
- 3) The conduit runs along the Interstate shall be HDPE SDR 11.
- 4) The conduit shall be run straight through the pull boxes at a depth of 30 inches in ITS installations and there shall be a minimum of 6 inches between the conduit and the bottom of the box.
- 5) The Contractor will be allowed to connect inner duct Interstate)/conduit (Arterials) from plow portion or underground conduit to bore portion by means of approved connection methods. The connection conduit method and material shall be submitted for approval to the FDOT Project Manager (pull boxes will no longer be required at directional bores or driveways).
- 6) Conduit shall be placed on the Interstate and shall have a minimum spacing of pull boxes at 2600 feet if possible.
- 7) Conduit shall be placed on the Arterials and shall have a minimum spacing of pull boxes at 1320 feet if possible.
- 8) Conduit for arterials are 2 - 2" runs and for interstate 4 - 1 1/4 " sdr 11 conduits (white, orange, red, yellow)

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**Lori E. Williams**

Fifth paragraph - " maintain Reasonable physical strength" . This word will not work, we must define minimum strength.  
I'm sure you have been made aware that one paragraph was repeated.

The term "minimum bend radius" needs to be explained.  
Thanks,

Lori E. Williams, M.E., P.E.  
Senior Engineer/Project Management  
District Construction Landscape Coordinator  
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**Steve Nunnery**

File: 6300003 - Installation Requirements - Conduit for Fiber Optic Cable  
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Comments:

Prevent the ingress of water, dirt, sand, and other foreign materials prior to, during and after construction, into the conduit. Run an AWG #12 copper single conductor locate wire outside the conduit when installed underground. The locate wire must be laid so its final position is 3" or less from the conduit. Insulate the wire with a .0045 mil minimum thickness polyethylene sheath that is orange in color and marked to indicate the manufacturer's identification and conductor size.

I am curious how we should spec directionally bored conduits to insure that the outside of the conduit locate wire ends up beside the conduit the entire length of the bore? Should we include a test that ensures we have conductivity in the locate wire? The locate wire called for outside the conduit must be laid simultaneously with the conduit to avoid damage to the conduit.

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**William Richards**

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UserTel: (386) 943-5161 or SC 373-5161.

Comments:

There is a need to add the following information to both 630-3.1.1 and 630-3.1.2:

You need to require splices of the locate wire to only occur in a pull box unless approved by the engineer. Splices made in the middle of a conduit run would be difficult to detect and repair. Also, the wire termination must occur only at the top of a pull box.

You need to require the wire to be tested to show it continuous and has no breaks. If it is broken, have the contractor replace at no additional cost to the Department.

What about boring of conduit. Will locate wire be the same. Need to indicate. Boring conduit creates more of a reason to place wire inside of the conduit. See comments below. You might want to check with Ken Weldon (State Utility Engineer) concerning the success of boring items with a locate wire attached. I do not believe there is a high success rate.

For 630-3.1.2, suggest you consider placing the wire in conduit. If not, require the wire to be wrapped around the conduit and not placed next to or on top of the conduit.

For 630-4.1, add the cost of testing the wire.

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**Clyde Green**

Re: Fw: Proposed revision to 6300003 – Installation Requirements – Conduit for Fiber Optic Cable

Conduit - Locate Wire

I suggest with the locate wire that the gauge be the same for both Signals and ITS.

They are proposing # 12 for the ITS and 14 for Signals. If #12 is required for ITS then we should use the same gauge for both. Conduit for either installation is located at the same depth. This will simplify the size wire required.

Clyde Green

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